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ABSTRACT

The units contained in this guide are intended primarily as resource materials to assist grade 5 teachers in identifying units into which career awareness concepts can be infused and also in identifying instructional activities that correlate basic skills and career education objectives. Introductory information includes a definition of career education and an outline of goals for elementary career awareness. There is 1 unit relating to language arts (listening skills), 19 units which relate to social studies (with emphasis on the development of the United States as a nation and covering the areas of student self-awareness, the community, industry, the school, transportation, the environment, and the family), and 5 science-related units (physics, environmental control, biology, marine occupations, and nutrition). Each unit contains the following: An overview, content outline, unit objectives, and unit description (which provides criterion referenced objectives, learning activities, and a list of materials). Materials listed are teacher references, children's books, study prints, kits, films, filmstrips, records and songs, and classroom materials and equipment used in the activities. Additional evaluation suggestions are included for some units. A list of unit authors and their schools concludes the guide. (TA)

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ED142781

# CAREER EDUCATION RESOURCE UNITS

GRADE: 5

May, 1976

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# CAREER EDUCATION RESOURCE UNITS

Developed by:

Teachers of Newark School District
Newark, Delaware

and the

Career Education Instructional System

A K-12 Exemplary Project in Career Education
Conducted Under
Part D of Public Law 90-576

The project reported herein was performed pursuant to a grant from the Office of Education, U.S. Department of Health, Education, and Welfare. Contractors undertaking such projects under Government sponsorship are encouraged to express freely their professional judgment in the conduct of the project. Points of view or opinions stated do not, therefore, necessarily represent official Office of Education position or policy.

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# FOREWORD

The career education resource units included in this guide have been developed and implemented by Newark School District teachers. These materials are intended to be utilized as resource materials. They can be adapted by teachers seeking ways to infuse career concepts into their existing curriculum, or they may be utilized as complete units.

Career education has rapidly become an educational priority at the national, state, and local levels. Hopefully these resource units will facilitate the integration of career concepts into the K-12 curriculum in a manner consistent with the educational needs of students.

Loren J. Thompson
Project Director

# INTRODUCTION

A major thrust of the Career Education Program is to assist students in preparation for a meaningful and successful life of work. The scope of career education begins with educational experiences in early childhood and continues throughout an individuals lifetime.

Initial emphasis of a career education program provides for an awareness of the world of work and direct experiences to motivate the learner's interest. As a child moves through school he increases his familiarity with the world of work and investigates the many options available to him. He then acquires the knowledge and training necessary to obtain meaningful employment or enter a post secondary institution upon leaving school.

The units which appear in these Career Education Resource Volumes were developed by elementary teachers in the Newark School District. The units are organized by grade level. A special volume entitled "Special Programs" has been assembled for programs appropriate for multi-grade activities.

The function of these units is to serve as a guide for teachers who are interested in adapting aspects of career education to their curriculum. They are intended to be utilized primarily as resource materials that can assist teachers in identifying units into which career concepts can be infused, and also in identifying instructional activities that correlate basic skill and career education objectives.

Components of each volume include introductory information which included the district definition of career education and career program goals, the instructional unit, and a listing of the teachers who developed the materials along with the school where the materials were field tested.

## Rationale for Elementary Career Awareness:

The child in his early years is in the process of defining roles; family roles to enable him to differ between father and mother; community helper roles which help him identify the mailman, the grocer, the truck driver and so on. The Awareness Phase can capitalize on this natural process of job identification in children, and help develop a sense of the great number of job opportunities available to adults. The Awareness Phase provides a broad base of reference which the child can use to narrow his choices of career possibilities and follow those choices in greater depth during his adolescent life.

Responsible attitudes toward work must be cultivated during the formative stages of development; the early years of a child's school life. His feelings toward himself and others, his dependability, his perseverance, his promptness, and the other fundamental building blocks of his character are formed during this early period. No matter what job the child eventually chooses, these positive attitudes will help assure success.

Occupational aspirations and positive work attitudes are important aspects of an Awareness Program, but they are of little real value without the basic skills of communication and computation, and the ability to think clearly. Since these basic skills are presently a fundamental part of an elementary school program, the Awareness Phase of career education begun at this level, will help knit these basic components together to give each child a first step on the way to a meaningful and satisfying career pursuit.

## Definition of Career Education:

Career education is a comprehensive educational goal designed to provide all youth the opportunity for career awareness and the opportunity to attain skills necessary to achieve economic independence and an appreciation of the dignity of work.

## Goals for Elementary Career Awareness:

GOAL 1: TO DEVELOP IN PUPILS POSITIVE ATTITUDES ABOUT THE PERSONAL AND SOCIAL SIGNIFICANCE OF WORK.

SUB GOALS: To develop in pupils an awareness that:

1. People need to work to preserve and advance society.
2. People work for rewards and satisfaction.
3. There are rules for all kinds of work.
4. All kinds of work are interdependent and should benefit society.
5. Attitudes and personality factors have an effect on work, performance, and success.
6. All work has dignity and is worthwhile.
7. All work involves the production of either goods or services.

GOAL 2: TO DEVELOP EACH PUPIL'S SELF-AWARENESS.

SUB GOALS: To develop in pupils an awareness that:

1. All people have dignity and are worthwhile.

2. People have differing abilities, values, attitudes, and interests; and occupations differ in their requirements and prospects.

3. Understanding and accepting oneself is a continuing developmental process which is influenced by experiences throughout life.

4. Each person assumes several different roles in relation to the people and situations with which he comes in contact.

GOAL 3: TO DEVELOP AND EXPAND THE OCCUPATIONAL AWARENESS AND OCCUPATIONAL ASPIRATIONS OF THE PUPILS.

SUB GOALS: To develop in pupils an awareness that:

1. All kinds of work need some skill or training.

2. All people can and should contribute their talents and capabilities to the world of work.

3. People should adapt to technological and sociological changes which create or eliminate work.

4. Environmental and cultural factors determine the kinds of work available.

5. Man's work affects his way of life.

GOAL 4: TO IMPROVE OVERALL PUPIL PERFORMANCE BY UNIFYING AND FOCUSING BASIC SUBJECTS AROUND A CAREER DEVELOPMENT THEME.

SUB GOALS: To develop in pupils an awareness that:

1. All kinds of work need basic skills and training.

2. Skills developed through basic subject materials can lead to an enjoyment of both work and leisure activities.

3. Acquisition of fundamental competencies is necessary for future skill development.

4. Communication skills developed through basic subjects can lead to better interaction and job understanding.

5. Successful learning experiences in basic subject areas are fundamental to achieveing career interests and making adequate decisions.

6. Variety in depth and types of skill development effects interdependency among people.

# LANGUAGE ARTS

Unit Title: LISTEN RIGHT - DO RIGHT

I. Unit Overview: This unit provides the student with the skills necessary for good discriminate listening. There skills include; listening for main characters and ideas, listening for step by step instruction in order to follow the directions correctly, and to be able to discriminate between oral presentation, analyzing, correctness of speech, fluency and word attack.

II. Unit Content Outline:

A. Following Directions
  1. Discussion
  2. Practice
B. Main Character and Ideas
  1. Outlining
  b. Evaluation
C. Oral Reading
  1. Concentration
  2. Response Evaluation
D. Analyzing Fluency
E. Career Awareness Listening
  1. Listening in Jobs
  2. Duty Outline
  3. Listening Tape

III. Unit Objectives: At the completion of this unit, the student will be able to...

1. follow a set of oral directions correctly.
2. write a list of the main characters from a story.
3. write a story outline.
4. discuss the fluency of oral reading.
5. Take an active part in oral reading activities.
6. rate oral reading and speech on fluency, grammar, and expression.
7. research career materials and present a listening tape to review this research.

IV. Unit Description:

Unit Objective #1: At the completion of this unit, the student will be able to follow a set of oral directions correctly.

A. Criterion-Referenced Objectives:
  1. Given a tape recording of a set of instructions, the student will be able to follow these instructions by performing correctly the directions given on the tape.

B. Learning Activities:
  1. Discuss the importance of being a good listener.
    a. What if a fireman or policeman wasn't a good listener?

2. Discuss with the students the importance of following directions correctly by concentrating on hearing them correctly.
   a. Being comfortable
   b. Over coming distractions.
3. The teacher will set up the tape recording of a list of 2 or 3 listening directions.
4. The student will perform these instructions, and the results will be discussed.
5. A review of what good listening means.
   a. Concentration
   b. listening for important facts and ideas
   c. listening for information.
6. This activity will be held for a one month cycle, if the student will be working in a station situation and will cycle to this section 5 or 6 times during the month.
7. Each time the student comes to this station , the list of instructions or directions increase in complexity.
8. An example of the first days directional work would be; Listen to all the details before writing anything. "Write your name on the upper right hand corner of your paper. Copy the date from the chalk board and put it in the upper left hand corner of your paper. Draw a large circle in the center of your paper and put an "X" in it.
9. Interspersed with this type of activity have some bright stories on tape for them to listen to.
10. Many records have filmstrips to help tell the stories. Use these too.
11. At the end of one month, evaluate the students on their ability to follow directions correctly, by giving them a list of oral instruction on tape to be followed. Evaluate their responses.

C. Materials:
   1. Filmstrips, records, tapes, tape recorder, ear phones. ear phone jacks, pencil, and paper.
   2. Books:
      a. Children and Oral Language- Helen K. Mackintosh, U.S. Office of Education Editoral Chairman copyright- ACEI, ASCD, IRA, NCTE- 1964.
      b. Language arts; The elementary School-Heat sec. Ed.

Unit Objectives #2 and #3: At the completion of this unit, the student will be able to (#2) write a list of main characters from a story and (#3) write a story outline.

A. Criterion-Referenced Objectives:
   1. Student will listen to a story and without note or books be able to write down the main characters in the story.

2. The student will listen to a story and then write a paragraph outlining the main ideas in the story.

B. Learning Activities:
1. Read a story to the students.
2. Have the students write down the names of the main character and a short story outline.
3. Discuss with them their written work and evaluate it as a baseline for evaluation.
4. In a station situation have the children listen to groups of short stories.
5. After hearing each individual, they will have to write down the main characters and give a written report on the story outline.
6. The teacher will run an on-going evaluation of each student's progress, either by chart or file cards.
7. After the end of a month's period the teacher will provide the students with a tape recording of a story, from which the students will have to list the main characters and write a one or two paragraph outline of the story.

C. Materials:
1. records
2. tapes
3. recorders
4. ear phones
5. ear phone jacks

Unit Objectives #4, #5, and #6: At the completion of this unit of instruction, the student will be able to (#4) discuss the fluency of oral reading, (#5) take an active part in oral reading activity, and (#6) rate oral reading and speech on fluency, grammar, and expression.

A. Criterion-Referenced Objectives:
1. During a group reading situation each reader will read a passage, the individual student will be able to follow along with the story and immediately read from the proper sentence when directed to.
2. The students will listen to a tape recording of themselves oral reading, then will take part in a discussion analyzing the fluency of the readers.
3. Given a group of 4 short paragraphs presented on tape with varying competencies in fluid oral language, the student will be able to rate these passages from one to four with one being the most fluid.
4. The teacher will tape each of the students as they orally read a paragraph.
5. The teacher and the students will play back these tapes and analyze them according to fluency, expression, work attack.

6. The teacher will present several sets of 3 or 4 tapes of someone reading a passage from a story. The person or persons will have varying competencies in reading.
7. The students will practice placing these recordings in order from one to four according to the taped passages fluently.
8. At the end of a lab or station cycle, the teacher will present to the students, tapes like those above, and the students will be evaluated on how well they can rank the tapes.

C. Materials:
1. tapes
2. tape recorder
3. records
4. pencil
5. paper

Unit Objective #7: At the completion of the unit the student will be able to research career material and present a listening tape to review this research.

A. Criterion-Referenced Objectives:
1. Given a recorded tape and/or filmstrip on a persons occupation, the student will write a short outline on the main duties of that career, and also from his research the student will make a 3 minute listening tape describing the occupation researched using the sounds of the occupation, giving oral clues, using as much descriptive wording as necessary, without mentioning the actual name of the career. This is so other students can listen to the tape to guess the career.

B. Learning Activities:
1. Some tapes on career opportunities will be presented.
2. A discussion on the need of good listening skills for these jobs will be held.
3. Each student will be assigned a different occupation for a two week research project.
4. At the end of the two weeks the student will have to hand in:
   a. a short 2 paragraph outline of the main duties of the assigned occupation.
   b. a 3 minute tape using sound, clues, descriptive language, which describes the assigned occupation without naming it.
5. The teacher will then present these tapes to the other students in the group, who will identify the careers and analyze the effectiveness of the listening tape.

C. Materials: tapes, recorder, records.

D. Evaluation: The evaluation for this unit is built into each learning activity.

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Books:

1. AV Instruction: Media and Methods, Brown, Lewis, Hareleroad, McGraw-Hill, 3rd ed. copy 1969.
2. SRA Reading Laboratory llA, Teacher's Handbook, 1969 ed., Don H. Parker.
3. Elementary Teachers Guide to Free Curriculum Material, Educators Progress Service, Inc.,
4. They All Need to Talk, Wilmo M. Possien-Appleton-Century-CROFTS-1969.

Filmstrips and Records:

1. The Long Hall Truck Driver - Endicott, Frank S., Society for Visual Education (SVE) c 1973.
2. The Automotive Mechanic - Frank S. Endicott, SVE, c 1973.
3. The School Worker - Kidd, Ronald, Family Filmstrips, c 1971.
4. What is a job - Lifton, Walter (SVE) c. 1967.
5. Dept. Store Workers - Calhoun, Audrey, Family Filmstrips, c. 1971.
6. What do you like to do? - Lifton, Walter (WVE) c 1967.
7. What are you? - Lifton, Walter (SVE) c 1967.
8. The telephone installer - Endicott, Frank S., SVE c 1973.
9. Supermarket Workers - Kidd, Ronald, Family Filmstrips, c 1971.
10. Television Workers - Calhoun, Audrey, Family Filmstrips, c 1971.
11. Hospital Workers - Calhoun, Audrey, Family Filmstrips, c 1971.
12. Doctor Office Workers - Kidd, Ronald, Family Filmstrips, 1971.
13. Fire Dept. Workers - Calhoun, Audrey, Family Filmstrips, 1971.
14. Library Workers - Kidd, Ronald, Family Filmstrips, 1971.

# SOCIAL STUDIES

Unit Title: A NEW NATION

I. Unit Overview: This unit inquires into government in general terms. Historically, it covers the transition of the American colonies into a nation and will give the class some ideas about the basic philosophy of our government, how that philosophy developed, and how it was used as the basis for the Constitution.

The political science perspective will also help to bring the historical events into sharper focus. The revolution is viewed, not as a reaction to absolute power or authority, but as a response to authority which the colonists considered unfair. Basically, the colonists revolted because they felt they were being deprived of their rights as English subjects. Their ideas of authority and representation conflicted with those of the English government.

The class will first examine how ideas of self-government and independence developed in the thirteen colonies; then, how these ideas' clashed with those of King and Parliament. The development of the Constitution is studied as a compromise between the need for a strong central authority and the desire for as much local autonomy and individual freedom as possible.

II. Unit Content Outline:
   A. Powderhorn simulation game
   B. How the colonies were ruled
   C. Colonies and Mother country drift apart
   D. Taxation and representation
   E. The clash of values
   F. The colonies demand their rights
   G. The decision for independence
   H. The war for independence
   I. Trying to form a government
   J. The Constitutional Convention
   K. The Confederation fails to make a nation
   L. The Constitution and the Bill of Rights

III. Unit Objectives: At the end of this unit, given a list, the student will identify that:
   1. at first, the English colonies in America enjoyed a great deal of self-rule.
   2. England tried to tighten her control over the colonies by passing new laws like the Stamp Act, the Quartering Act, and the Tea Tax.
   3. Acting individually and in groups, many of the colonists protested and finally revolted against what they considered to be the unfair laws passed by the English -- especially the laws which taxed them while denying them representation in Parliament.

4. The Declaration of Independence from English rule was signed by the members of the Continental Congress on July 4, 1776.
5. The Constitutional Convention of 1778 worked out a compromise plan for a new government which became the Constitution of the United States.
6. The Bill of Rights, which protects the freedoms of the people of the United States was added to the Constitution.
7. The problems the American colonists faced when trying to form a new government.
8. Make comparisons between situations they faced in playing a game situation which the colonists faced before, during and after the American Revolution.
9. Contrast the views and values of the colonists to the views of the English at the time before the American Revolution.
10. Name the 3 branches in government of a democracy.

IV. Unit Description:

A. Criterion-Referenced Objectives: At the end of this unit, the students, given a multiple choice type test, will be able to determine:

1. How much self rule the first English colonies in America had in government.
2. How the English tried to tighten her control (which act was passed).
3. The main reason why the colonists revolted against England.
4. Who signed the Declaration of Independence (which body of people) and on what date it was signed.
5. Which document the Constitutional Convention of 1778 composed.
6. The main problem which the colonists faced in forming a new government and the portion of the Constitution that protects the freedoms of the American people.
7. In what specific way the simulation game was like the American Revolution.
8. The viewpoint the English held as to who should rule the colonies.
9. The viewpoint the colonists held as to who should rule the colonies.
10. The branch of government in which a judge would work.
11. The executive head of the United States government.
12. The main function of the legislative branch.
13. The title of the occupation of someone who makes his living defending people in court.

B. Learning Activities:
1. Powderhorn Simulation game
2. Evaluating evidence and drawing conclusions
3. Holding a town meeting to determine future course of action for the class in regard to writing a Constitution.

4. Have a constitutional Convention having lawyers, merchants, craftsmen, newspaper men, and farmers from colonies come to the convention to draft a constution for the class (role-play)
5. Make up laws in large group for team government.
6. Hold an election to elect a President, Vice-President, delegates from each team to be in the law-making council.
7. Elect two magistrates for the fifth grade.
8. Field trip to Independence Hall.
9. Resource visitors.

C. Materials:
1. Holt Databank System.
2. Powderhorn game in Holt Databank.
3. Sound filmstrips in Holt Databank.
    a. The War for Independence
    b. The Clash of Values

## PRE AND POST TEST

1. At first the English colonies in America:
   - a. had no self-government
   - b. had ruled themselves completely
   - c. had a great deal of self-rule
   - d. were ruled completely by the King

2. As time passed, the English tried to tighten her control by passing:
   - a. the income tax
   - b. the Stamp Act
   - c. The Social Security tax
   - d. The wage tax

3. The colonists revolted against England because:
   - a. they did not want to pay taxes
   - b. they were not proud to be Englishmen
   - c. they had no part in passing what they thought were unfair laws

4. The Declaration of Independence was signed on July 4, 1776 by:
   - a. The Continental Army
   - b. The King of England
   - c. The Governor of Pennsylvania
   - d. Members of the Continental Congress

5. The Constitutional Convention in 1778 wrote:
   - a. The Declaration of Independence
   - b. The Emancipation Proclamation
   - c. Constitution of the United States
   - d. The Stamp Act

6. In forming a new government, the American colonists faced the problem of:
   - a. making the people agree to be ruled by a king
   - b. forming a national government that would be strong enough to rule but which could be overturned by the people.
   - c. where to meet
   - d. making people agree to no taxes

7. The American Revolution was like the Powderhorn simulation game because:
   - a. everyone had a say in what the rules were
   - b. people rebelled against unfair rules made by a few
   - c. both were very peaceful

Pre and Post Test (con't)

8. The colonists thought:

   a. that they had undergone all the hardships so they had the right to rule the country they had won
   b. the King and Parliament had a right to rule the new land
   c. the Indians had the right to rule the colonies
   d. only the wealthy had a right to rule

9. The English thought:

   a. that the colonies should only make money for the settlers
   b. that the colonies could not be taxed by the English Government
   c. that the English government had furnished the money and founded the colonies to make England rich
   d. that the colonists should rule themselves

10. The colonial craftsmen were:

    a. given dignity and respect by the King
    b. regarded as superiors to advise a king
    c. regarded as rebellious radicals by the king
    d. not respected by the colonists

11. The branch of government that a judge would be found in would be:

    a. judicial
    b. legislative
    c. executive

12. The executive head of the United States government is the:

    a. Congress
    b. President
    c. Supreme Court

13. The legislative branch of the U.S. government:

    a. makes the laws
    b. carries out the laws
    c. sees if the laws are fair

14. In order to defend someone in court you should be a:

    a. judge
    b. clerk
    c. lawyer

Unit Title: CAREER-OCCUPATION-RESEARCH-EDUCATION

I. Unit Overview: This unit acquaints the pre-teen age child with the working world, and makes him aware of how technology has rapidly narrowed the fields available to the unskilled and untrained; also, how college trained workers are flooding the market of the unemployed while jobs requiring skilled tradesman and technicians go unfulfilled. It attempts to steer students into appropriate career choices. The unit begins with the child's survey of his parents' place of employment and the kind of work they do. Studies of various occupations reveal the interdependence of all families in the team, one upon another. These occupations include professional, sales, industrial, clerical, operative careers. The unit then surveys the students' town of Newark and the state of Delaware showing occupational pursuits and conditions which contribute to them. In the middle of the unit, the students who live in the industrial city of Newark form and operate corporations as a way of experiencing this way of life.

II. Unit Content Outline:
   A. Interdependence occupations of parents of team students
   B. Research into parents occupations
   C. Presentation of reports and displays on occupations
   D. Study of Newark, the industrial city
   E. Study of Delaware and the interdependence of its regions
   F. Formation of corporations by classes
   G. Operation of corporations

III. Unit Objectives: At the end of this unit, the student will be able to...
   1. identify the three major components of a business enterprise.
   2. describe the benefits of division of labor used in the assembly line in mass production.
   3. analyze the concept of profit and its importance in the economy.
   4. differentiate between highly-skilled jobs and manual jobs in regard to respective compensations.
   5. list three sources of income of households.
   6. identify the two basic components of the concept of interdependence.

IV. Unit Description:

   A. Criterion-Referenced Objectives: At the end of this unit, given a multiple choice test, the student should be able to identify:
      1. the three basic needs for production
      2. 3 reasons why a business may locate in a particular area.
      3. 1 advantage of mass production
      4. one reason why each worker doing a special job in an assembly line, results in more profits by the company.

5. One way banks make most of their profits
6. What a person must make if he is to stay in business
7. One reason why skilled labor earns higher income
8. Three sources of household income
9. 2 things interdependence includes

B. Learning Activities:

1. Team discussion on interdependence and on forming a corporation.
2. Map work showing home, school, services, and business of Newark, DE.
3. Visits of parents and others telling about the various occupations, their requirements and their responsibilities
4. Field trips to industries showing assemble lines.
5. Construction of displays and models of the products, and techniques involved in parents' occupations.
6 Written and oral reports on parents occupations involving all areas.
7. Formation of class corporations as candy companies, newspapers, cardboard construction companies, coaster companies, pot holder companies.
8. Selling the products
9. Advertising

C. Materials:

1. Booklets and maps of the city of Newark and the state of Delaware.
2. Art supplies - construction, paper, paint, clay, tagboard, etc.
3. Research materials on occupations in library
4. Multi-texts
5. Raw material, tools, financial ledgers, advertising, materials for companies.

D. Evaluation:

## PRE AND POST TEST

1. A person receives for work done in our country.

   a. food, housing, clothing
   b. services
   c. money
   d. wealth

2. What are the basic needs for production?

   a. land, labor and workers
   b. money, labor and land
   c. money, land and natural resources
   d. natural resources, labor and government

3. What is not a problem?

   a. what to produce
   b. who's to produce
   c. for whom to produce
   d. why to produce

4. Why might a family buy a cheaper product rather than a more expensive product?

   a. the family has a low income
   b. the family wants it more than some other product
   c. the family can then buy more of other products
   d. all of the reasons above

5. Mass productions is:

   a. productions of goods of fine quality
   b. productions of goods in great quantity
   c. production of more expensive goods
   d. production of interior goods

6. A business may locate in a particular area of the nation to be near:

   a. a market for products
   b. a source of raw materials
   c. a source of labor
   d. all of the above

7. Marketing is:

   a. buying and selling
   b. advertising
   c. financing
   d. transporting

8. Given a small income, a wise buyer buys those things which are:

   a. most popular
   b. newest
   c. well-advertised
   d. most satisfying

9. People who do not produce goods and services:

   a. still contribute to total output
   b. will receive from private business
   c. cannot receive any income
   d. may receive income from government

10. In the assembly line:

    a. each worker performs various kinds of work
    b. there is no need for trained workers
    c. workers change jobs often
    d. each worker performs one certain job

11. Doing one job will allow more total output with the same amount of materials because it results in more:

    a. jobs
    b. production per worker
    c. products
    d. effort per person

12. In our economy, the people who decide on the kinds of goods and services to be produced, are they:

    a. government
    b. consumers
    c. labor unions
    d. businesses

13. In our economy, business men try to use material, labor and buildings in:

    a. the way suggested by government
    b. the most popular way
    c. the least costly way
    d. the most usual way

14. Banks make most of their profit by:

    a. lending money and charging interest
    b. cashing checks and holding Christmas club deposits
    c. holding checking accounts
    d. holding savings deposits

15. The assembly line in mass production make possible:

    a. slow production and more expensive products
    b. slow production and cheaper products
    c. rapid production and cheaper products
    d. rapid production and more expensive products

16. Profit is:

    a. money made by the operation of a business
    b. money loaned to operate a business
    c. money lost in the operation of the business
    d. none of the above

17. To be well to stay in business, a businessman must:

    a. cover costs
    b. make a profit
    c. pay for taxes
    d. pay wages

18. The Board of Directors is:

    a. the President and Vice-President of a company
    b. the persons in charge of the departments
    c. the group of officers who run the company
    d. the laborers in the assembly line

19. Skilled labor earns higher income because:

    a. they get a better supply of material
    b. they try harder
    c. then can produce more
    d. they are more expensive

20. Individual buyers must choose between certain goods and services because of:

    a. government regulations
    b. supply
    c. smaller income
    d. demand

21. Households may receive income from:

    a. wages and salaries
    b. pensions
    c. government payments
    d. all of the above

22. The quality of the product depends upon:

    a. the contribution of every worker
    b. the ability of the company officers
    c. the hard work of the company president
    d. none of the above

23. Stocks are:

    a. the money in a savings bank
    b. the money paid out for services
    c. money in a checking account
    d. the money which a company uses to conduct a business

24. A craftsman is:

    a. a skilled worker
    b. a laborer
    c. a supervisor
    d. one who is unemployed

25. People go to work to:

    a. help the government
    b. earn money
    c. sell products
    d. pay the cost of products

26. Interdependence is:

    a. taking care of yourself
    b. relying upon others
    c. having others depend upon you
    d. both b and c

27. The price of a product depends upon

    a. the cost of raw material
    b. cost of labor
    c. cost of buildings and equipment
    d. all of the above

28. If people did not pay taxes to support services as schools, police, parks, etc., they would:

    a. have to do without these services
    b. use some of their money to buy these services themselves
    c. be given these services by private business
    d. receive less income

29. Money is valuable because:

    a. people must work to receive it
    b. it stands for gold and silver
    c. it can buy goods and services
    d. all of the above

30. Advertisement:

    a. is unnecessary in the sale of a product
    b. hurts the sale of a product
    c. is necessary to sell a product
    d. doesn't matter

31. The packaging of a product is most important because it:

    a. will protect the product
    b. can help sell the product
    c. will preserve the product
    d. none of these

32. Clerical workers of a company are:

    a. bookkeepers, stenographers, file clerks
    b. truck drivers, crane operators
    c. salesmen, sales managers
    d. draftsmen, engineers

33. The most important source of money to start a business is:

    a. banks, lending, savings
    b. people buying the product
    c. people buying stocks
    d. the government spending money

34. The Board of Directors of a company:

    a. appoints the president and vice-president
    b. runs assembly line
    c. keeps company records
    d. takes charge of advertising

35. If there are several businesses selling the same product, the competition will:

    a. increase the price
    b. lower the cost
    c. make no difference
    d. keep the same price

Unit Title: COMMUNICATION

I. Unit Overview: This unit will examine early and modern systems of communication and how they have affected our history. It will emphasize the important role that communication plays in helping man to acquire his basic needs. Throughout this unit, man's role will be stressed, not only through the jobs which are created by the systems but also through the interaction and cooperation necessary for man to communicate.

II. Unit Content Outline:
  A. Communication
    1. Definition-communication is to send and receive messages
    2. Necessity for communication
    3. Kinds of communication (systems)
      a. Early
        1. grunt
        2. recognizable sounds
        3. sign language
        4. Cave painting
        5. picture writing
      b. Modern
        1. morse code
        2. telegraph
        3. signal light
        4. signal flags
        5. teletype
        6. telephone
        7. radio
        8. T.V.
        9. satellite
        10. braille
        11. written forms
        12. postal system
    4. Methods of communication
      a. speech
      b. music
      c. drama
      d. sculpture
      e. drawing
      f. poetry
      g. prose
    5. Man is not the only animal that communicates
      a. bee
      b. dolphin
      c. domestic pets
    6. Effect of communication on history
      a. political diplomacy
      b. war strategies
      c. growth of country

7. People of interest
    a. Samuel F. B. Morse
    b. Gugliclmo Marconi
    c. Alexander Graham Bell
    d. Thomas A. Edison
    e. Louis Braille

III. Unit Objectives: The student will be able to...
1. discuss orally the necessity of communication in supplying our basic needs.
2. compare and contrast early and modern communication systems.
3. identify people whose jobs plan an important role in communication.
4. differentiate between communication for the purpose of sharing information and communication for the desire to express emotions and moods.
5. discuss how other forms of life communicate.
6. identify some of the effects communication has had on the growth of the United States.

IV. Unit Description:

Unit Objective #1: The student will be able to discuss orally the necessity of communication in supplying our basic needs.

A. Criterion-Referenced Objective:
    1. Student will be able to write a paragraph stating at least three reasons why communication is necessary in supplying our basic needs.

B. Learning Activities:
    1. Square Cooperation Game- students divide themselves into five groups. Each group is given an envelope containing pieces to a square. Each group must try to put their square puzzle together. The groups may not talk with one another or among themselves. No one may take a puzzle piece from another group, however, groups may be given pieces from others.
    2. Rumor Clinic- Teacher appoints 7 detectives and one eye-witness. (The rest of the class observes and contributes to the discussion at the end.) The teacher sends detectives out of the room and flashes on the screen a picture showing communication and action among people (a scene of conflict is good). The eyewitness and class are allowed to see the pictures. Detective #1 is called in and sits with his back to the screen. Eyewitness, with back to screen now, tells Detective #1 what he saw. Detective #2 is called in- he sits with his back to the screen and detective #1 tells detective #2 what the eyewitness told him. This process continues until all detectives have been called in and given their accounts to each other. Class discussion follows emphasizing different accounts of picture from eyewitness to detective #7.

3. Play Telephone Game- Students sit in circle. One member whispers message to person sitting to their right, this person in turn, communicates message to person on their right. Play continues until last person has heard the message. He says message out loud, person who started message also tells message aloud. Students discuss results. i.e. difference in messages and reasons for this.
4. People need to work to preserve and advance society. Discuss need for people to work together and communicate. Trace different groups who have worked together for a common purpose. i.e. Blackfoot Indian Tribe, early settlers and pioneers, scouts, Red Cross, space program and telephone company.

Unit Objective #2: The student will be able to compare and contrast early and modern communication systems.

A. Criterion-Referenced Objectives: Student will be able...
   1. to write two concise paragraphs comparing and contrasting early and modern communication systems. Included in each paragraph will be at least three examples from each time period.
   2. to collect and classify pictures of early and modern communication systems.
   3. to make a diagram or build a model showing how one system of communication works.

B. Learning Activities:
   1. Bring in magazines and cut out pictures depicting various methods of communication. Working in groups the student will classify these pictures on a chart according to early and modern communication systems.
   2. Students prepare report on a system of communication (early or modern). Present to class either a model of:
      a. signal flag
      b. walkie talkie
      c. telegraph
      d. signal light
      e. braille language
      Or diagram of:
      a. telephone
      b. T.V.
      c. radio
      d. satellite
   3. Books, encyclopedias and filmstrips will be supplied so students can research communication systems.
   4. Conduct research, individually and as a group, upon such topics are:
      a. The development of our alphabet
      b. The development of the printing press
      c. How news was carried in colonial America
      d. Great personalities of the news world

5. Construct a diorama depicting:
   a. how news comes to us today
   b. the town crier of colonial America
   c. Pony Express Rider
   d. A modern printing office
6. Make a primitive picture alphabet
7. The warning light at a railroad crossing is a line-of-sight system. List other familiar line-or-sight systems in daily use (traffic lights, red flags on trucks, buoys, morse code, traffic signs- divide these and others mentioned into one-way and two-way systems).
8. Introduce rhebus writing to the class. Have them construct examples.

C. Materials:

Transparency: Parts of a front page-My Weekly Reader

Filmstrips:

1. Pony Express EFL16- Enrichment Landmark Filmstrips
2. New Communications Era- by Communications Satellite Corporation District of Columbia Public Schools.

Study Prints:

1. Primitive Communications Set #202- Walt Disney
2. Written Communications Set #203 Walt Disney
3. Technological Communications Set #204- Walt Disney

Unit Objective #3: The student will be able to identify people whose jobs play an important role in communication.

A. Criterion-Referenced Objectives: Student will be able...
   1. to list at least two jobs relating to a modern communication
   2. to enumerate the responsibilities related to the specified jobs.
   3. to report on the contribution of one of the people who have played an important role in the development of communication.

B. Learning Activities:
   1. Use reference sources. The students will research a chosen communication system with special emphasis on jobs relating to that system.
   2. Discuss job responsibilities in general. Have students choose which relate to his chosen job interest.

3. Research invention: (Samuel Morse, Guglielmo Marconi, Alexander G. Bell, Thomas A. Edison, Louis Braille) for the purpose of presenting a play:
    a. "To Tell the Truth"
    b. "Dating Game"
    c. "You are There" or Time Machine
4. Prepare a booklet- "Who's Who in Communication"- including some of the famous inventors and people involved in communication in some way today.

C. Materials:

Filmstrips:
a. Samuel F. Morse- Great American Inventors. Curriculum Systems Inc.
b. Alexander Bell- 400013- McGraw-Hill
c. Thomas Edison- 400015- McGraw-Hill

Unit Objective #4: The student will be able to differentiate between communication for the purpose of sharing in emotions and moods.

A. Criterion-Referenced Objective:
1. Given five hypothetical situations, the students will be able to state whether the communication was a form of self-expression, a means of conveying information, of both.

B. Learning Activities:
1. Teacher will give students code message to decipher. Students will make up code message for other students to decipher.
2. Study Braille printing and deaf sign language. Decode messages.
3. Tapa Concept Development
    a. "What are some ways in which people communicate?"
4. In groups students will choose one method of communication. i.e. speech, music, drama, sculpture, drawing, poetry (cinquain or Diamant), prose, and demonstrate to class.
5. Prepare a booklet on various methods of communication classifying them into informative communication and self-expression.

Unit Objective #5: The student will be able to discuss how other forms of life communicate.

A. Criterion-Referenced Objective:
1. Student will be able to gather data on the communication process of at least one other animal form.

B. Learning Activities:
1. Give students a list of animal forms. The student will choose one to research on communication.

Unit Objective #6: The student will be able to identify some of the effects communication has had on the growth of the United States.

A. Criterion-Referenced Objectives:
   1. Student will be able to investigate and describe in oral report form the role that communication played in three events in our history.
   2. Given a situation where communication has played a part in our history, the student will be able to categorize this event under political diplomacy, war strategies or growth of our country.

B. Learning Activities:
   1. Have elderly person come to class to tell children how things were 60 or 70 years ago.
   2. The students will categorize the following situations under political diplomacy, war strategies or growth of our country:
      a. pony express
      b. telegraph
      c. dispatch riders
      d. Paul Revere (signal light)
      e. Newspapers (reporting war news, gold discovered, etc.)

## BIBLIOGRAPHY

1. Creative Educational Society; Signals to Satellites in Today's World; World, 1965.
2. Wilkinson, Jean and Ned; Come to Work with Us in a Telephone Company; Sextant Systems, Inc., 1970.
3. Hogben, Lancelot; The Wonderful World of Communication; Dubleday, 1969.

Unit Title: CONFLICT

I. Unit Overview: This unit will examine how man's interdependence can lead to conflicts. Our major emphasis will be on the student becoming more aware of himself, his aptitudes, his character traits and how his behavior influences others. Second, we'll deal with why conflicts occur relating this to the student's own experiences and also historical context. Problem solving involving a variety of alternatives will be the main method used by the students.

II. Unit Content Outline:
   A. Classroom
   B. Family (ways of handling conflict and alternatives)
   C. Nation
      1. Wars- American Revolution vs. Civil War (compare and contrast)
         a. causes
         b. leaders
         c. different methods of equipment and fighting
         d. strategies
         e. outcomes- was anything gained?
         f. alternatives- could this have been avoided? How?
      2. Socio-economic conflict (racial and ethnic)
   D. World
      1. Arab-Israeli conflict
      2. Ireland

III. Unit Objectives. The student will be able to...
   1. discuss orally the importance of each person having individual talents and skills to contribute to our interdependent society.
   2. discuss the effect of positive and negative behavior on others.
   3. identify situations which are possible sources of conflict in his family and classroom.
   4. present alternatives for handling conflict in the home and classroom.
   5. identify the possible outcomes resulting from a chosen course of action.
   6. list situations in our history where and why conflicts have occurred.
   7. list the effect that different leaders, methods, equipment and strategies and on conflicts in our history.
   8. Given the source of the conflict the student will be able to suggest alternatives which could have changed the course of our history.
   9. identify reasons for conflict among various racial and ethnic groups.
   10. recognize and cite evidence of interdependence within his family group.

IV. Unit Description:

Unit Objective #1: The student will be able to discuss orally the importance of each person having individual talents and skills to contribute to our interdependent society.

A. Criterion-Referenced Objectives:
1. The student will prepare and present a skit with others in which each person's talents and skills are expressed.
2. Given a problem situation, the student will be able to state at least five different skills or talents which contribute to the solution of the problem.

B. Learning Activities:
1. Using some project (play, game) compose chart to show what each student contributed to project. Discuss why each person chose the role they did. Suggest projects:
   a. solve a difficult math problem.
   b. read a story to class
   c. demonstrate a science experiment
   d. sign or play an instrument
   e. give a speech
   f. teach the class a new game
   g. demonstrate a phase of art
   h. plan hobby show
2. Have children prepare an ad or T.V. commercial. Have the children do project individually, then in groups. Compare performance and discuss whether quality of work was improved or lessened due to peers.
3. Me and My Interests- children prepare collage on oaktag with magazine pictures of their interests and talents leaving space in middle for picture of student. Classmates try to guess who each collage belongs to.
4. Have children observe one person on the street in the morning as they come to school. Describe person and give a report on what they imagine the person's work in the community.
5. Have children think of ways they could help others to perform tasks in school.
6. Give a task to be done- i.e. constructing a tree house, preparing a dinner. Have children plan individually or in groups.
7. Have pupils collect pictures of as many different kinds of faces as they can find and make into a collage showing enormous diversity to be found among city people. Pupils might choose one face that interests them and report on what they think the person might be like, where he comes from, lives, does, etc.
8. Make T-shirts showing interests and talents of person who will wear the shirt.

C. Materials:
1. Filmstrips: Acceptance of Difference, SVE Developing Basic Values

Unit Objective #2: The student will be able to discuss the effect of positive and negative behavior on others.

A. Criterion-Referenced Objectives:
  1. The student will be able to make a list of ten positive character traits and ten negative traits.
  2. The student will be able to discuss in a panel report attributes and character traits that contribute to success in school and work.

B. Learning Activities:
  1. Have children make a list of ten positive and ten negative character traits.
  2. Have each child at the beginning of the month write 2 goals he plans to accomplish that month. Place in sealed box. Children must provide at month's end tangible evidence of goal achievement. At the end of the month, the teacher reads each child's name and he reports reasons for success or failure.
  3. Have each child list what would be achievements for him in each area: athletic, social, academic, cultural.
  4. Bulletin board-"I am Proud of Myself"- students can put up "their own thing."
  5. Interview several people to find out why their job is important to them and whether they feel success in their job. Discuss character traits and attributes which contribute to success in job. Compare two people- why has one been successful and the other not? Culminate activity with panel discussion of attributes and character traits contributing to a successful job.
  6. Discussion- what we like and dislike about people's behavior.
     a. role-play certain behavior situations in work settings.
     b. have class discuss behaviors portrayed.
     c. cut out magazine pictures displaying different expressions.
  7. Have students prepare a party or visitation. Next, write how their school knowledge helped them do that activity.

C. Materials:
  1. Filmstrips:
     a. What Do You Think About Tattling? Churchill Films.
     b. What Do You Think About Finders Keepers? Churchill Films.
     c. What Do You Think About Promises? Churchill Films.
     d. What Do You Think About Lying? Churchill Films.
     e. Recognition of Responsibilities. SVE Developing Basic Values.
     f. Learning to be Forgiving, SVE Family Filmstrips
  2. Sound Filmstrips:
     a. Developing Basic Values, SVE

Unit Objective #3: The student will be able to identify situations which are possible sources of conflict in his family and classroom.

A. Criterion-Referenced Objective:
   1. Given a list of situations the student will be able to determine which are possible sources of conflict.

B. Learning Activities:
   1. Use pictures which are possible situations on conflict to stimulate discussion.
   2. Divide the class into small committees. Each committee is to pretend it is lost in the woods and must plan to get food and shelter until reserve parties arrive. This time is summer. Each committee reports on its plan and describes what jobs each member would do. Give students a list of "tools" the party has, i.e., summer clothes, two pocket knives, some matches, safety pins, string, etc. Describe the environment, i.e. woods, bramble, brushes, stream with fish, birds, and wild animals. (This activity may be used also with objective #4.)
   3. Illustrate what would happen if there were no workers in certain jobs.
      a. janitor
      b. secretary
      c. highway construction workers
      d. fishermen
      e. baker
      f. forest workers
      g. nurse
      h. policemen
      i. dentist
      j. doctor
      k. teacher
      l. carpenter
      m. bus driver
      n. farmer
   4. Role-play classroom situations:
      a. fighting on the playground
      b. group games on a playground
      c. class in lunchroom
      Discuss possible sources of conflict in above situations.
   5. Have each child tell about a task he performs at home with another person. Next, have each state orally a time in which conflicts occurred, how they were settled and how each felt about it.

Unit Objective #4: The student will be able to present alternatives for handling conflict in the home and classroom.

A. Criterion-Referenced Objectives:
   1. Given a conflict situation and the results of handling that situation in a certain way the student will be able to suggest two alternative methods of dealing with that conflict.

B. Learning Activities:
   1. Use everyday situations as they occur and examine how problem was settled and possible alternatives.
   2. Prepare ditto sheet of the following:
      Directions: After each conflict situation choose from the list people who can supply the needed help. People who help: fireman, teacher, lawyer, father, mother, counselor, doctor, banker, nurse, librarian, policeman, clergyman, judge, and welfare worker.
      a. A boy has been arrested for stealing a car.
      b. Man has run off and left his wife and child, who can help them?
      c. Man wants to start a company.
      d. A boy wants to build a radio.
      e. A boy wants to know what kind of job to look for.
      f. A family's house is on fire.
      g. A girl can't solve a math problem.
      h. A man finds someone who's going to rob a store.
   3. Instructor Magazine, August/September, 1973, p. 94.

Unit Objective #5: The student will be able to identify the possible outcomes resulting from a chosen course of action.

A. Criterion-Referenced Objective:
   1. Given a problem situation and suggested ways of dealing with that problem, the student will be able to predict the result of each suggested mode of action.

B. Learning Activities:
   1. Teacher will present case studies of problems and solutions. Students will present alternatives and results.
   2. Prepare ditto sheet of the following:
      Directions: Put (a) beside problem if you can solve it alone, (b) beside problem if you need help.
      a. You have lost money on the street.
      b. You can't find a book in the library.
      c. Your best friend argues with you.
      d. You break your leg.
      e.. You're feeling alone and blue.
      f. You're looking for a job.
      g. You need money for food.
      h. Things are not going well at home.
      i. You're lost in town.
      j. You don't get along with your teacher.
      k. Your car won't start.
      l. You lost your temper.
      m. You're always late for school.
      n. You're afraid of noise at night.
      o. Someone doesn't like you.
      p. You're arrested for stealing.
      q. You didn't bring an assignment to school.
      r. You can't stay out late.

3. Have students write 7 short paragraphs suggested ways they would solve 7 of the above problems. Discussion follows.
4. Hold a meeting of representatives chosen by the class to discuss a question such as how everyone in the classroom should act. Then hold a meeting of the whole class regarding the same question to demonstrate direct democracy. Then let pupils decide which was more effective.

Unit Objective #6: The student will be able to list situations in our history where any conflicts have occurred.

A. Criterion-Referenced Objectives: The student will...
   1. be able to state at least three specific events in our history where conflicts have occurred.
   2. For each conflict that the student lists, the student will be able to list four or more causes for that conflict occurring.
   3. The student will construct a chart comparing and contrasting the causes of:
      a. American Revolution and Civil War
      b. Conflict in Ireland and Arab-Israeli War

B. Learning Activities:
   1. Students role-play confrontations between:
      a. northern vs. southern soldier
      b. abolitionist vs. slave owner
      c. slave vs. plantation owner
   2. Construct charts comparing and contrasting causes of American Revolution and Civil War, Arab-Israeli War and Conflict in Ireland.
   3. Gather current events on:
      a. Arab-Israeli Conflict
      b. Conflict in Ireland
   4. Have two pupils conduct a panel discussion between a rebel and a loyalist on the eve of the War of Independence. What reasons would the rebel give for wanting to fight a War for Independence? Why would a loyalist be against it?
   5. Have some children pretend to be roving reporters interviewing others (pro and anti British) regarding their feelings on the British government. Discuss compromises that might have prevented the war.

6. Construct a chart.

| Action taken by the King and/or Parliament | Action taken by American Colonists |
|---|---|
| a. molasses act, navigation acts | |
| b. the proclamation line of 1763 | |
| c. the sugar act of 1764 | |
| d. quartering act (1765) | |
| e. stamp act (1765) | |
| f. repeal of stamp act | |
| g. townshent acts (1767) | |
| h. repeal of townshent acts (1770) | |
| i. tea act (1773) | |
| j. intolerable acts (1774) | |

C. Materials:
  1. Filmstrips:
    a. Causes of the Revolution. Young America Films, 400067.

Unit Objective #7: The student will be able to list the effect that different leaders, methods, equipment and strategies had on conflicts in our history.

A. Criterion-Referenced Objectives: The student will...
  1. be able to analyze and evaluate through reporting the effect that different leaders, methods, equipment and strategies had on the American Revolution and the Civil War.
  2. be able to demonstrate his knowledge of weapons by constructing models or drawing diagrams.
  3. be able to demonstrate his understanding of strategies used by drawing diagrams or presenting a mock battle.

B. Learning Activities:
  1. Compare soldiers of colonial days with Civil War and present:
    a. reasons for being in
    b. pay received
    c. type equipment
    d. compulsory or volunteer
  2. List jobs created by American Revolution, Civil War, and Vietnam War. List products produced. Write a paragraph telling what would happen during peace time to these jobs and the people involved in them.
  3. Make a class bulletin board or individual portfolios showing pictures of Revolutionary War (American and British) and Civil War (north and south) uniforms, cannons, muskets, etc. Compare and contrast collections.
  4. Pupils begin Civil War scrapbooks containing pictures, maps, exerpts from books, profiles of leaders in north and south, and eminent black leaders, etc.

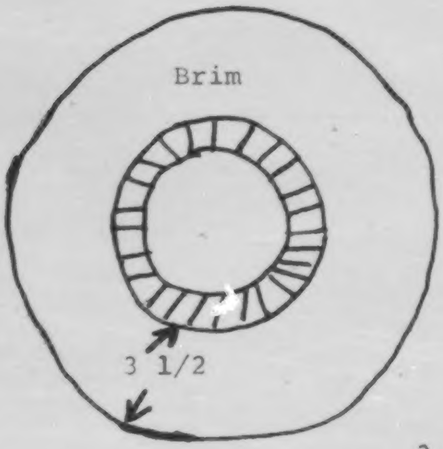
5. Complete ditto attached.
6. Complete crossword puzzle attached.
7. Draw diagrams and present mock battles.
8. Construct models or draw diagrams of weapons.
9. Locate the names of 5 important people involved.
    a. in American Revolution
    b. in Civil War
10. Write several paragraphs on the following: What difference would it have made in your life if the American Revolution had never been fought? What debt do we own the men who fought it? (can also be used with objective #8)
11. Make a historical newspaper on the Revolutionary War (suggested format):

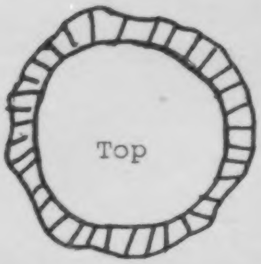
| | |
|---|---|
| News Items: | British defeated at Saratoga<br>Plans of American forces<br>Casualities of Americans |
| Feature Articles: | Life at Valley Forge<br>A Target Range Practice<br>A Word of Encouragement from the General |
| Editorials: | What the Saratoga Victory Means to us. |
| Cartoons: | A Surprised Englishman |
| Advertisements: | Parchment<br>Leather<br>Guns<br>Ale |

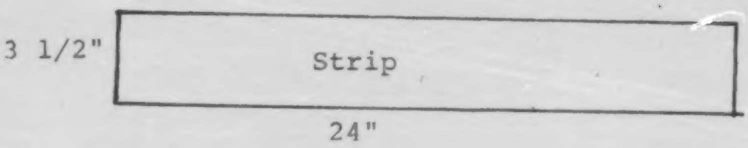
12. Students can use their knowledge to prepare a script for a movie or slide show on either the Revolution or Civil War.
13. Make paper hats for Revolutionary War and Civil War soldiers. (see attached sheet for directions)
14. Make a chart of "Differences between the North and South. Head one half "The South" and the other "The North." Under each head, list information in three columns: "states," "occupations and industries," and "leaders."

C. Materials:
1. Filmstrips:
    a. Patrick Henry, American Partiots, 8002, Encyclopedia Britanica Films.
    b. Story of Thomas Jefferson, SVE, A246-9.
    c. George Washington's Birthday, Troll Associates.
    d. Struggle for a New Continent, McGraw-Hill, 400066.
    e. War for Independence, McGraw-Hill, 400068.
    f. A New Nation, McGraw-Hill, 400071.
    g. Independence and Constitution, Enrichment Landmark Filmstrips, EFL3.
    h. Minutemen, Enrichment Landmark Filmstrips.
    i. Story of Abraham Lincoln, SVE.
    j. Frederick Douglass, SVE.
    k. Harriet Tubman, SVE.
    l. Lincoln and Douglass, Enrichment Landmark Filmstrips, EFL15.

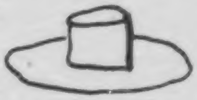
# REVOLUTIONARY WAR HAT (RED OR BLUE)





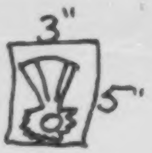


1. Fit strip to child's head (staple).
2. Have child fit top in, folding or cutting tabs to fit.
3. Brim in, using long stapler.

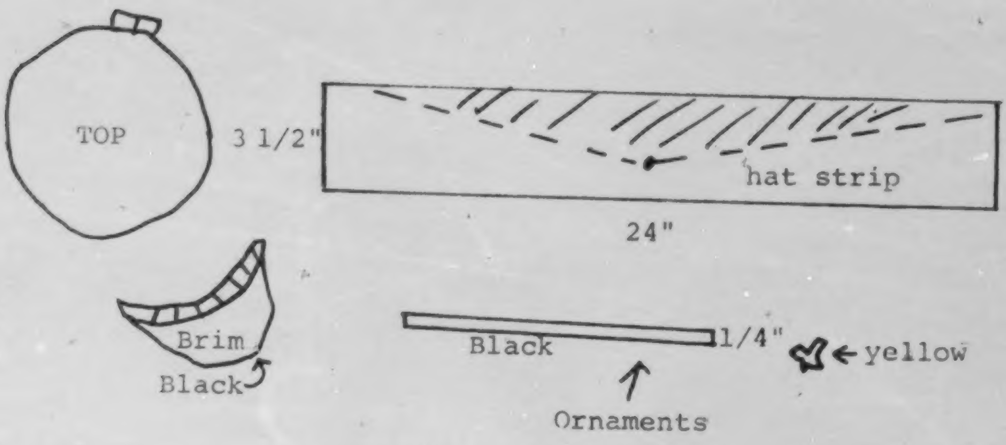


4. Turn up 3 sides evenly to form tri-corner.

5. Cockade on side cut from 3" x 5" paper. (Color cockade red, white and blue with yellow medal for Colonial hats; red, yellow, red with yellow medal for British hats.)



# CIVIL WAR HAT (BLUE OR GRAY)

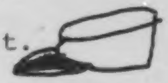

TOP
3 1/2"
hat strip
24"
Brim
Black
Black
1/4"
yellow
Ornaments

1. Have child measure strip to find exact center. Draw lines from center to upper corner. Cut along lines and discard top triangle.

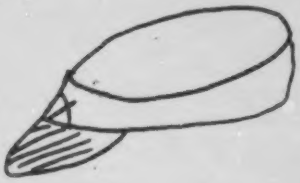
2. Measure strip to child's head...staple.

3. Have child fit top into strip, folding or cutting tabs to fit.

   Make sure ✓ is on top.

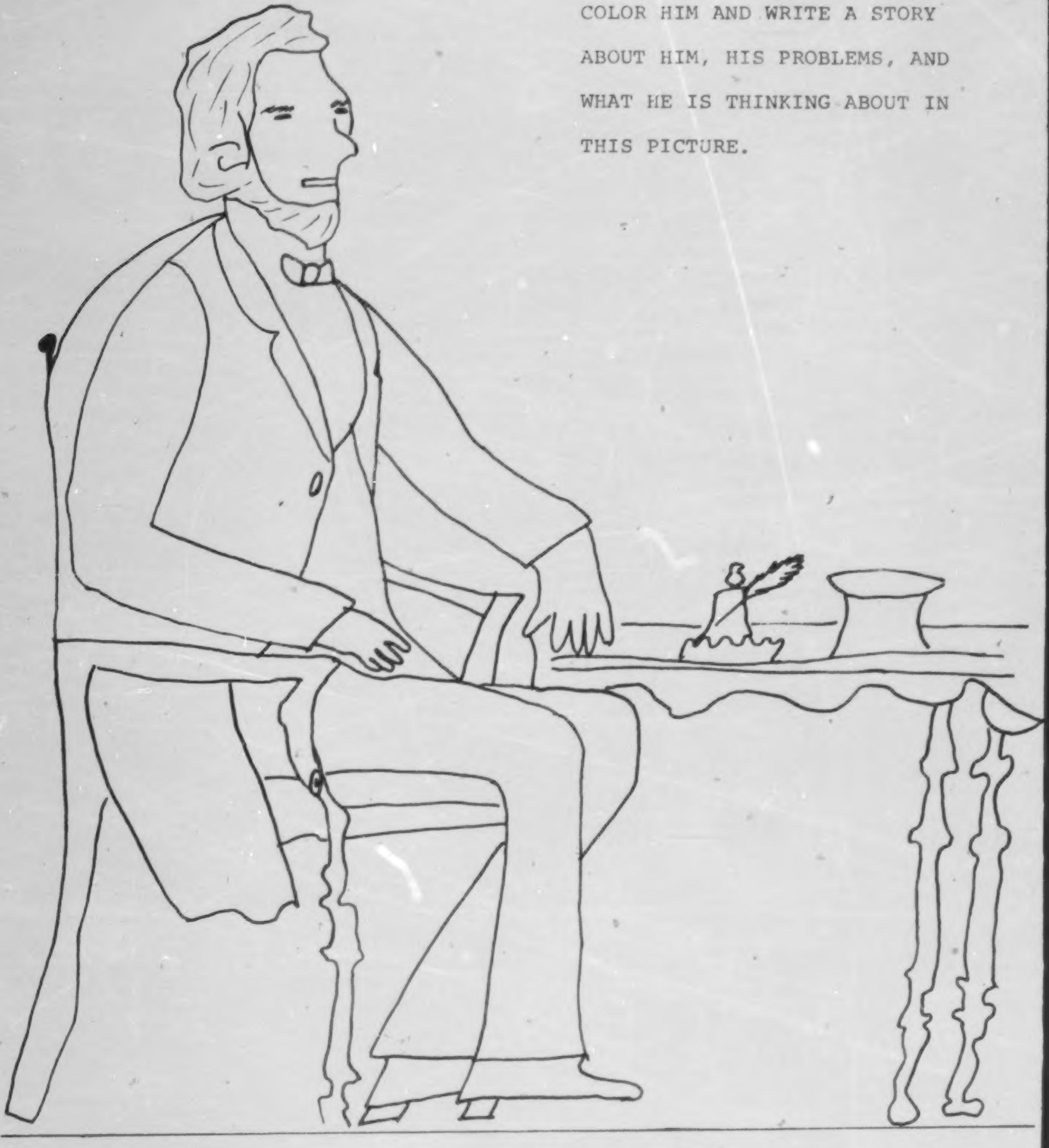
4. Staple brim to front of hat. 

5. Small black strip is stapled around front of hat at either side. Yellow guns (crossed) right in front of hat.

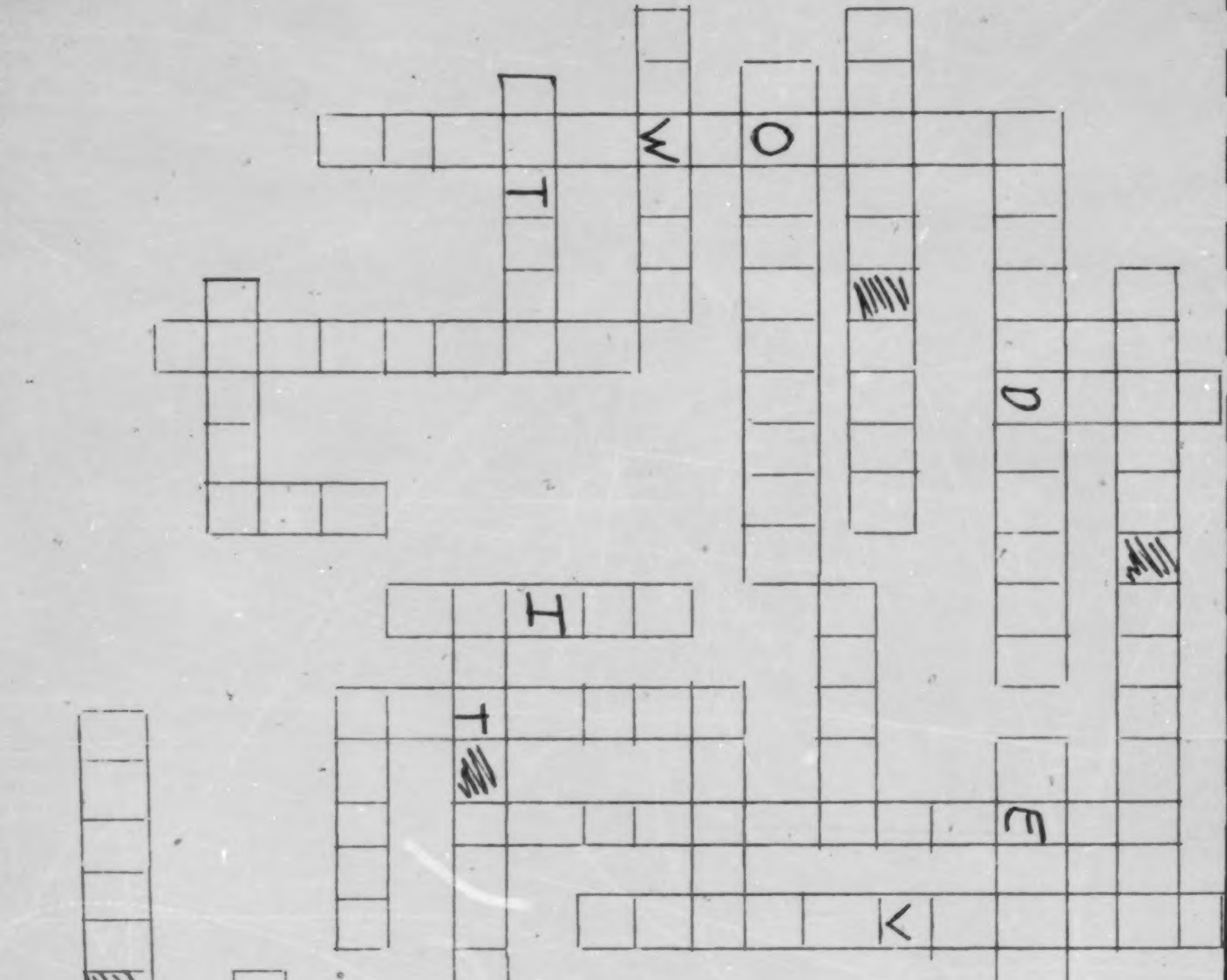


NAME______________________________

WHO IS THIS FAMOUS MAN?
COLOR HIM AND WRITE A STORY
ABOUT HIM, HIS PROBLEMS, AND
WHAT HE IS THINKING ABOUT IN
THIS PICTURE.



HAWAII
MCKINLEY
UNION
CONFEDERACY
ABE
FORT SUMTER
GENERAL GRANT
MERRIMAC
MONITOR
LEE
WAR
NORTH
SOUTH
CATTLE
RANGE
SHEEPHERDERS
GOLD
GHOST TOWNS
HOMESTEADS
RAILROADS
JAMES HILL
INDIANS
BUFFALO
MAIZE
RESERVATION
LARAT
CABLE STATION
MISSISSIPPI
COMMONWEALTH


W
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Y

   - m. Lee and Grant, Enrichment Landmark Filmstrips, EFL11.
   - n. How do we know about the Civil War? Education Direction, Inc.
   - o. The War on the Water, Education Directions, Inc.
   - p. The Foot Soldier in the Civil War, Education Direction, Inc.
   - q. Supporting Services in the Civil War, Education Direction, Inc,
   - r. The Artillery in the Civil War, Education Direction, Inc.
   - s. The Toll of the Civil War, Education Direction, Inc.
   - t. Winter at Valley Forge, Enrichment Landmark Filmstrips.
2. Records: American Landmark Enrichment Records
   - a. Our Independence and the Constitution
   - b. Paul Revere and the Minutemen
   - c. Thomas Jefferson, Father of Democracy
   - d. Abe Lincoln, From Log Cabin to the White House
3. Kimbo Records:
   - a. The War Between the States

Unit Objective #8: Given the source of the conflict the student will be able to suggest alternatives which could have changed the course of history.

A. Criterion-Referenced Objectives: The student will be able...
   1. to debate possible alternatives to a given situation.
   2. to take either the American Revolution or Civil War and at least one (1) alternative course of action that might have prevented the war.

B. Learning Activities:
   1. See Objective 6, Activity #5.
   2. See Objective 7, Activity #10.
   3. Make a two-column chart called, "A New Nation." Head one column "For" and the other "Against." List arguments for and against the making of a new nation. Use reference books.

Unit Objective #9: The student will be able to identify reasons for conflict among various racial and ethnic groups.

A. Criterion-Referenced Objectives: The student will be able to...
   1. state five reasons why they don't get along with other people.
   2. list five reasons why people might not get along with them.
   3. prepare a panel discussion discussing different racial, ethnic and sexual sterotypes.
   4. write a paragraph explaining how a sterotype that they hold has affected their action toward other people.

Unit Objective #10: The student will be able to recognize and cite evidence of interdependence within his family group.

A. Criterion-Referenced Objectives:
   1. The student will be able to match a given responsibility with appropriate family members.
   2. The student will be able to compare and contrast his role in the family group with the role of a child from another culture.

B. Learning Activities:
   1. List responsibilities of each family member. Write a paragraph of the effect that would result if one family member neglected their responsibilities.
   2. Bulletin board of family responsibilities.
   3. Draw a picture of a family member helping a child learn a new skill.
   4. Create center of skills in family responsibilities, i.e. cooking, sewing, hammering, doing dishes, mowing grass, setting table, feeding pets, child care. Match each job with family member.
   5. Children make a chart of each job they do in their family- beside each put salary scale pretending what paid for each.
   6. Have students organize activities in which they share responsibility and leadership. Examples: Have students plan a family night or family outing, picnic, trip. Make a chart showing each family member and their respective chores and duties for this activity.
   7. Find and read a story about someone your age who lives in a different society. Be prepared to tell the class some of the things the person in the story learned to do in his family.
   8. Have children talk over with their parents three or four things they will have the right to do when they grow up and duties attached to each. Discuss in class and compare the lists. Are there things people agree on? Why?

C. Materials:
   1. Filmstrips:
      a. About Helping Your Community, Churchill Films.
      b. About Helping Your Family, Churchill Films.
   2. Sound Filmstrips:
      a. Learning to Live Together, SVE Developing Basic Values.

## AMERICAN REVOLUTION BIBLIOGRAPHY

1. Cunliffe, Marcus; American Heritage; American Heritage, 1966.
2. Perind, Aulaire, Ingrid and Edgar; George Washington; Doubleday, 1936.
3. Benchley, Nathaniel; Sam the Minuteman; Harper and Row, 1969.
4. Bliven, Bruce; The American Revolution; Random House, 1958.
5. Colby, C.; Revolutionary War Weapons; Coward, McCann, 1963.
6. Douth, Ester M.; Patriot Doctor; The Story of Benjamin Rush; Meassner, 1959.
7. Foley, Rai, Dood, Mead; Famous American Spies, 1962.
8. Forbes, Esther, Houghton-Mifflin; America's Paul Revere; 1946.
9. Gauch, Patricia Lee; Aaron and the Green Mountain Boys; Coward, McCann and Geoghegan; 1972.
10. Hall-Quest, Olga, Dutton; From Colony to Nation; 1966.
11. Lancaster, Bruce, Doubleday; The American Revolution; 1959.
12. Lens, Sidney, Putnam; A Country is Born; The Story of the American Revolution; 1964.
13. Mason, F. Van Wyck; The Winter at Valley Forge; Random House; 1953.
14. Miers, Earl S; Yankee Doodle Dandy; Random House, 1953.
15. Morris, Richard B.; The First Book of the American Revolution; Watts, F.; 1956.
16. Reeder, Red, Duell, Sloan and Pearce; The Story of the Revolutionary War; 1962.
17. Russell, Francis; Lexington, Concord and Bunker Hill; Meredity Press, 1963, American Heritage.
18. Martin, Joseph Plumb; Yankee Doodle Boy; Scott, W.R.; 1964.
19. Savage, Josephine, Day; Daughter of Delaware; 1965.

## CIVIL WAR BIBLIOGRAPHY

1. Miers, Earl S.; American Heritage Abraham Lincoln in Peace and War; Harper and Row; 1964.
2. Barnes, Eric W; The War Between the States; McGraw-Hill; 1959.
3. Catton, Burce; This Hallowed Ground; Doubleday; 1956.
4. Foster, G.; The Eyes and Ears of the Civil War; Criterion Books; 1963.
5. Freeman, Fred; Duel of the Irelands; Time-Life, 1960.
6. Kane, Harnett, T; A Picture Story of the Confederacy; Lothrop, Lee and Shepard; 1965.
7. Kanton, MacKinlay; Lee and Grant at Appomattox; Random House; 1950.
8. Monjo, F.; The Vicksburg Veteran; Simon and Schuster; 1971.
9. Werstein, Irving; The Many Faces of the Civil War; Messner; 1961.
10. West, William, C.; Great Battles of History, Gettysburg; World; 1966.
11. Dupuy, Trevor, N.; The Military History of Civil War Land Battles; Watts, F.; 1960.
12. Cromie, Alice H.; A Tour Guide to the Civil War; Quadrangle Books; 1964.
13. Colby, Carroll,B.; Civil War Weapons: Small Arms and Artillery of the Blue and Gray; Coward-McCann, 1962.

Unit Title: FROM THE CAVE TO A CITY

I. Unit Overview: A study of the development of early man from a survival existence to a fairly complex civilized society, encompassing definition and clarification of terms, the logical steps of man's progression to civilization through his use and dependence upon environment, and the availability and interdependence of occupations as man began to specialize to help himself and satisfy the needs of others.

II. Unit Content Outline:
- A. Cave People
  - 1. Survival
  - 2. Planting
- B. Civilized Man
  - 1. Definition
  - 2. Requirements
  - 3. Specialization
- C. Career Information: (optional)

III. Unit Objectives: The student will be able to...
1. do a written report dealing with working as a hunter team in a food-gatherer survival culture to illustrate interdependency and its value.
2. write a paper and discuss his livelihood activities to show the relationship and interaction of his environment.
3. research the Aha! Phenomenon and glean discovery ideas that benefit the society.
4. discuss the effects of a surplus of food upon a society.
5. write up and discuss the various possibilities of specialization and the interdependence of careers within the society.

IV. Unit Description:

Unit Objective #1: The student will write a report illustrating interdependence of a hunter team in a survival culture.

A. Criterion-Referenced Objectives: The student will...
1. write three or more topical paragraphs in complete sentences that tell precisely how he helps his teammate.
2. In discussion, names the tools and their adaptability to his specific tasks.
3. discuss at least two reasons why he is playing his particular role on the team.

B. Learning Activities:
1. Research Early Man in an encyclopedia or reference book.
2. View a film or filmstrip appropriate to the subject.
3. Read a book or article dealing with early man.
4. See a movie or T.V. special covering the subject matter.
5. Use text for a background starting point.

Unit Objective #2: The student will show the relationship and interaction of environment upon livelihood activities.

A. Criterion-Referenced Objective: The student will...
  1. be able to write a report of at least two pages enumerating three or four livelihood activities and how his environment affects what he does.
  2. Make a map of the geographic area of his society showing latitude, land forms, nearness of bodies of water, and in discussion tell how each factor influences his environment and three ways he puts these surroundings to use.

B. Learning Activities:
  1. Background text or reference reading and research on early man's adaptation to his environment.
  2. Make illustrative models of early man's tools.
  3. Locate the living area in an atlas; use the legend to determine the physical factors of the areas environment.
  4. View filmstrip on map skills.
  5. Write observations about present-day community environment and how it affects daily living.

Unit Objective #3: The student lists and discusses new ideas discovered by the Aha! Phenonmenon.

A. Criterion-Referenced Objectives: The student will...
  1. write a clear definition of the topic.
  2. be able to list and discuss at least three examples of the Aha! Phenomenon as it relates to early man coping with his environment.
  3. be able to show his grasp of the concept by telling about something he has learned through personal experience.

B. Learning Activities:
  1. Dictionary use.
  2. Appropriate use of film or filmstrip covering discoveries by early man.
  3. Science experiments relating to the effect of heat upon metals.
  4. Observations of wild vegetation growth.
  5. Planting seeds, cultivation and observation.

Unit Objective #4: The students will be able to discuss affects of a food surplus upon a society.

A. Criterion-Referenced Objectives: The student will...
  1. be able to list at least four environmental factors that influence food surplus and tell the importance of each.
  2. Demonstrate grasp of the concept of free time by stating and detailing at least five diversifications of early man's activities as a result of food surplus.

B. Learning Activities:
   1. Background text reference to early man's struggle for control of his environment.
   2. Dictionary use for vocabulary-building as related to subject under study.
   3. View film or filmstrip depicting job and skills specialization by early man.
   4. Do illustrated reports on selected specialization skills.

Unit Objective #5: The students write and discuss specialization possibilities and the interdependency and importance of careers within a society.

A. Criterion-Referenced Objectives: The student will...
   1. demonstrate understanding of the meaning of civilization by writing and discussing the three requirements of being civilized, and telling about (in logical sequence) at least four factors that influence progression from survival living to civilization.
   2. list reasons his career is important to him, and at least two ways it serves the needs of others.

B. Learning Activities:
   1. Text and reference book research background on early man's dramatic change from cave living to a city.
   2. Use of appropriate films and filmstrips.
   3. Group forms a hypothetical society with given factors as a starting point and each performs a specific job in the society, relating it to himself and to others showing interdependence of all.

## MATERIALS

Books:

1. ERCA. The Human Adventure; Ancient Civilization; Allyn and Bacon, 1971.
2. Compton Co., Young Children's Prencyclopedia, Vol. 1, 8, 13, 14.
3. Brandler, Burce, National Geographic Society Staff; The River Nile.
4. Commercial television: National Geographic (and other) specials on early man.

Delaware DPI Films:

1. Debt to the Past (A-196)
2. Ancient World Inheritance (004)
3. The Story of Prehistoric Man (172)
4. Man and His Tools (A328)
5. Mystery of Stonehenge (B-231)

Filmstrips:

1. Long Filmstrip Service; Climate; (FS-231)
2. McGraw-Hill Co.; Weather and Seasons,(FS-123)
3. Eye Gate House; The Story of Seeds, (FS-305)
4. Singer SVE; Water Transportation, Native Craft,(FS-672)
5. McGraw-Hill Co.; Lattitude & Longitude: Time Zones & Climates; (FS-381)

Fields Enterprises; World Book Encyclopedia

Unit Title: GROWTH OF INDUSTRY

I. Unit Overview: This unit will examine the growth of industry in the United States from colonial days to the present. The students will study the role of the worker in colonial industry and how these roles have changed today. The students will become aware of our growing dependence on one another because of our increasingly complex and specialized society. A study of a modern factory will reinforce the concept of interdependence in producing goods and services.

II. Unit Content Outline:
- A. What is industry? In this unit, we will be emphasizing the production of a marketable commodity.
- B. Colonial Industry
  - 1. candle maker
  - 2. blacksmith
  - 3. cooper
  - 4. cabinet maker
  - 5. silversmith
  - 6. seamstress
  - 7. glassmaker
- C. Industrial Revolution
  - 1. Early Pioneers
    - a. Eli Whitney (1790)
      - 1) cotton gin
      - 2) principle of interchangeable parts
    - b. Samuel Slater (1790)- first factory
    - c. Irenee DuPont- Gunpowder mill (1802)
    - d. Francis Cabot Lowel (1813)- first factory for weaving cotton yarn into cloth
    - e. Milling Machine (1820)- could make machine parts
    - f. Joseph Henry (1831)- simple electric motor
    - g. Cyrus McCormick (1834)- reaper
    - h. Elias Howe (1846)- sewing machine
    - i. 1916- Universal Milling Machine
  - 2. Post Civil War Industry
    - a. Inventors
      - 1) Alexander Graham Bell- Telephone
      - 2) Thomas A. Edison- Electricity etal
      - 3) Charles & Frank Duryea- gas powered
      - 4) Henry Ford- assembly line
    - b. Industrialists
      - 1) Andrew Carnegie- steel
      - 2) John D. Rockfeller- oil
      - 3) Henry Ford- automobiles
- D. Study of a modern factory
  - 1. Machines
  - 2. Occupations
  - 3. Salaries and benefits
  - 4. Working conditions

NOTE: * Items children completed independently on a contract basis.
O Items children completed in class.

III. Unit Objectives: The student will be able to...
1. identify and discuss occupation which provided needed goods in colonial days.
2. discuss the causes and major events of the Industrial Revolution.
3. discuss orally important people and events in Post Civil War industrial growth.
4. compare and contrast manufacturing in colonial times and manufactring today.
5. discuss major aspects of modern factory organization.

IV. Unit Description:

Unit Objective #1: The student will be able to identify and discuss occupations which provided needed goods in colonial days.

A. Criterion-Referenced Objectives: The student will...
1. list at least five (5) trades in which goods were produced in colonial days.
2. Given a product produced during colonial days, the student will be able to match it to a specific occupation.
3. discuss in a panel the importance of cooperation among colonial people in producing and acquiring goods.

NOTE: We also used books for content information which we read and discussed together.

B. Learning Activities: Display- "From the Shops of New England"
1. Draw and cut out pictures of different items made by colonial New England shop owners. Mount pictures on cardboard or stiff paper and put a brace on the back of each each picture so it will stand up. Children can make models of some: i.e. furniture, silverware, iron cookware, etc.
2. Export map of the 13 colonies.
3. Complete worksheet attached.
4. Have kids make up newspaper job ads for colonial times.
5. Collect pictures, brochures, display items of Williamsburg. Children can plan a "Williamsburg Day" including:
   a. model shops
   b. hat making
   c. students can dress in costume
   d. candle dipping
   e. weaving frame
   f. colonial meal
   g. colonial games and music
6. Draw pictures of early methods and tools used to perform certain household tasks- making clothing, soap, cooking, churning butter, getting water, cleaning clothes.

7. Let each pupil choose an occupation in a typical colonial town: farmer, minister, doctor, banker, teacher, shipbuilder, watchman, blacksmith, merchant, coach-maker, innkeeper, etc. Let each person dressed in typical costume, describe his chosen work and how he would be paid for it.

C. Materials:

1. Filmstrips: Tools and Handicrafts of Colonial Frontier: McGraw-Hill 402163
   The Craftsman; The Gun Smith; The Basketmaker: Colonial Williamsburg, Inc. Filmstrip Division Box C, Williamsburg, VA 23185
2. Films: Eighteenth-Century Life in Williamsburg (Colonial Williamsburg, Inc.) (Can be rented)
3. Transparency: How Colonists Lived: Set of 27: Civic Educational Service Valiant Instructional Materials.

Unit Objective #2: The student will be able to discuss the causes and major events of the Industrial Revolution.

A. Criterion-Referenced Objectives: The student will...
1. distinguish between production of goods and production of services.
2. list at least three reasons for the Industrial Revolution.
3. identify at lease five major pioneers of the Industrial Revolution and their contribution to the growth of industry.
4. write a paragraph stating why the principle of interchangeable parts, the invention of the universal milling machine, and the invention of the simple electric motor were important catalysts of the Industrial Revolution.

B. Learning Activities:
1. "To Tell the Truth Game" or "Password" using events and pioneers of Industrial Revolution.
2. Social Studies "Baseball Game" of questions on events and pioneers of Industrial Revolution.
3. Make booklets of famous inventors, including drawings or pictures of inventions telling why and when they were important.

4a. Mention number of jobs. Divide jobs into:
   a. Those that are concerned with productions of goods.
   b. Those that are concerned with providing services.

4b. Play product game- use jobs mentioned above. Have children clap hands if the job involves production of goods and stand up it if involves production of services. Examples of jobs:
   a. father giving haircut
   b. man raising chickens
   c. father building boat.

5. Collect ads from magazines and newspapers of manufactured items.
    a. List and group those ads which are examples of product.
    b. List and group those ads which are examples of services.
    c. Graph products and number of ads in #a.
    d. Using products in #a have children use yellow pages to see which of the products are manufactured in the Wilmington-Newark area.
    e. Using products in #a have children write a paragraph on how a man on an assembly line might view them.
6. Make a mobile showing the balance between producers of goods and services.
7. Resource materials will be utilized to enable the student to list three reasons for the cause of the Industrial Revolution.
8. Resource materials utilized to enable student to write a paragraph stating why the principle of interchangeable parts, the invention of the universal Milling Machine, and invention of simple electric motor were important catalysts of Industrial Revolution.

C. Materials:
    1. Filmstrips: Henry Ford- The Man Who Put America on Wheels; 65G Eye Gate.
    How Industry Began; Eye Gate
    Wright Brothers: EFL 17; Robert Fulton; EFL 10; Enrichment Landmark Films

Unit Objective #3: The student will be able to discuss orally important people and events in Post-Civil War industrial growth.

A. Criterion-Referenced Objectives: The student will...
    1. distinguish between an inventor and an industrialist.
    2. list four Post-Civil War and their contributions to industry.
    3. compare and contrast the life and contributions of two major United States industrialists.

B. Learning Activities:
    1. See Objective #2, Activities 1, 2, and 3.
    2. Make pictures of early models of automobiles and changes since early days. Arrange models chronologically on shelf paper...draw future autos also.
    3. Have students use reference materials to investigate early industrial practices in the areas of: working conditions, child labor laws, laws passed to correct abuses, rise of unions.
    4. Have student choose an industrialist and investigate whether or not his descendents have continued their influence in that industry.

5. Give students a list of inventors and let them see if they can choose the industry that corresponds simply by seeing the name of the inventor:
   John McAdam
   George Eastman
   George Pullman
   Charles Goodyear
   John Deere
   E. Otis
   W. Carrier
   C. Birdseye
   Henry Ford
   NOTE: Students can then check reference books to see if they are correct.

C. Materials:
   1. Filmstrips: Alexander Bell; 400013; McGraw-Hill
      Andrew Carnegie, Master of Steel; 65 D; Eye Gate
      Story of Steel; A340-1 SVE
      Henry Ford- The Man Who Put America on Wheels; 65-G; Eye Gate

Unit Objective #4: The student will be able to compare and contrast manufacturing in colonial times and manufacturing today.

A. Criterion-Referenced Objective:
   1. The student will be able to complete a chart comparing manufacturing in colonial and modern times.

B. Learning Activities:
   1. "Then and Now" drawings or magazine pictures of tools used to produce clothing, soap, food, butter, waste, and to enable people to wash clothes and clean house.
   2. List jobs which have become extinct and discuss the reasons why needs of society, usefullness to economy, industry and technology.
   3. Make a collage of jobs created within the past five years.
   4. Draw pictures contrasting extinct and present jobs.
   5. Make a chart:

| Job in Colonial Days | Present Day |
|---|---|
| | |

6a. Discuss the most numerous types of occupations engaged in during various eras on United States history.

6b. Complete a chart:

| Colonial | Pioneer | Modern |
|---|---|---|
| 1. hunting | 1. farming | 1. radio |
| 2. farming | 2. fishing | 2. T.V. |
| 3. shipping | 3. trapping | 3. law enforcement |
| | 4. lumber jacking | 4. space technology |
| | 5. railroad building | 5. factory work |

6c. Draw a mural of above sequence.

7. List the following products and beside each occupations which arose because of them.

cotton gin
light bulb
telephone
car
television
sewing machine
subway
radio
radar
airplane
saw
wheel
barbed wire
satellite

Unit Objective #5: The student will be able to discuss major aspects of modern factory organization.

A. Criterion-Referenced Objectives:
1. Given pictures of factories the students will group and label them according to similarities and differences.
2. Given a suitable activity, the students will develop a sequence of production comparable to a factory's sequence used in production.
3. Given a specific kind of factory the student will be able to list:
    a. machines used
    b. occupations
    c. salaries and benefits
    d. working conditions

B. Learning Activities:
1. List jobs in factories. Classify as to professional, skilled, and unskilled. Write a paragraph for each job describing training necessary.
2. Using a role of wrapping paper draw a mural to show how parts of an automobile travel the assembly line until the auto is finished. Students will need to start with 2 lines- chassis line and body line.

3. Divide the class in half. Provide materials for making paper chains. Have one half work individually, cutting, pasteing and assembling. Direct the other half to divide the work with some children cutting strips, others pasting and others assembling. Compare quantity produced, time required and quality of finished product.
4. Children collect pictures of factories. Arrange and display.

5a. Group and label factories in Delaware area:
How are they alike?
Types of products
Location of plants
Size of products

b. Make a list of the factories where children's parents are employed.

c. Locate on a map factories in Delaware area.

d. Using a scale map, compute distance from school to different factories.

e. Locate ads and news articles of factories in Delaware area.

6. Field trip to a local factory if possible.
7. List jobs in factory according to:
   a. production of goods
   b. production of services
8. Ditto the following survey for each child to complete:

ABSENCE ON JOB

1. How many times were you absent last month?
2. Why were you absent each time?
3. If absent the same number of days each month, how much time would you lose in one school year?
4. If you worked 8 hours a day and received $2.00/hour, how much would you lose for each day absent?
5. How much money would you lose in a month? How much did you make?
6. How much money would you lose in a year? How much did you make?
7. If you were an employer how would you feel about people who were absent from work often?
8. How can attendence be improved?

9. Have students collect pictures of items people have in their homes. Classify pictures according to possible places of production (factory, ship, home). Point out that food, handicraft items or art objects are produced in the home not factory.
10. Draw three environmental problems caused by factories.
11. Assign an art project to a group of 10 students but give them one pair of scissors and a crayon. Then give one student all materials and tools required to do the job. Explain how businessmen must equip their factories with the right number of tools and workers.

12. Complete the following chart:

| Equipment | Those who use it | Those who depend on workers |
|---|---|---|
| Tractor | | |
| Plow | | |
| Cash Register | | |
| Typewriter | | |
| Airplane | | |
| Refrigerated Truck | | |
| Sawmill | | |
| Vase | | |
| Scissors | | |
| Shampoo | | |
| Boat | | |
| Train | | |
| Camera | | |
| Hammer | | |
| Broom | | |
| Paint Brush | | |
| Sewing Machine | | |
| Pots and Pans | | |
| X-ray machine | | |

13. Negotiate a new contract. Your budget is $40,000 which of the following benefits would you choose?
    a. health insurance (additional) $20/yr. per worker or $20,000 a year.
    b. 14 minute extra lunch- $18,750/yr.
    c. company picnic $ 1,000/yr.
    d. day care $ 8,000/teacher
        $ 4,000/2 aides
        $ 2,000/4 college students
        $ 4,000/equipment
        $ 2,000/operating expenses
        Total- $22,000- company willing to pay ½ or $11,000
    e. special training for new workers $5,000/yr.
    f. one personal day per worker per year $5,000/yr.
    g. five additional sick days $12,000/yr.
    h. educational courses $20/yr. per worker or $3,000/yr. total.
    i. laundry services for uniforms $2/week per worker or $10,000/yr.
    j. bus fare $8,550/yr. prevents building new parking lot.
    k. recreational park $20,000/yr. for 4 years.
14. Invent an object to do a better job or perform a task for you. Draw a picture of your invention and write a paragraph stating why you invented it, how it works, and the time it saves you.

15. Discuss need for future objects to benefit man. List occupations that would arise from these products.
16. Cut a picture from a magazine. Paste on cardboard. Cut puzzle pieces out. Have a friend put your puzzle pieces together timing each time. Discussion would follow as to reasons for increase in productivity each time.
17. Divide half of the children to use resources to determine what a factory is. Divide other half to use resources to determine what manufacturing means. Share information.
18. Look in want ads for factory jobs. Fill in chart.

| | Experience | Pay | Hours |
|---|---|---|---|
| Printer | | | |
| Machine Operator | | | |

19. Murals, mobiles, puppet shows, picture cartoons, poetry or bulletin board can be prepared to show workers and events in a factory.
20. Make a map of a factory.
21. Choose a product produced in a factory.
    a. make a poster to advertise the product.
    b. list reasons why people need or want the product.
    c. list raw materials necessary to make the product.
    d. list jobs involved in making product.
    e. bring in pictures of the product.
    f. Investigate how and why product has changed since it was first developed.
    g. make a chart showing sequence of production.
    h. if possible, make a model of the product.
    i. try to determine the cost of the product to the manufacturer and buyer and compute the difference.
22. Teacher will give students a factory:
    a. list machines used
    b. list occupations
    c. list salaries and benefits
    d. list working conditions

C. Materials:
  1. Filmstrips:
    a. My Dad Works in a Factory; Churchill Films; Imperial Films Co.
    b. Working in Manufacturing; X335-G; Eye Gate
    c. Producing the World's Goods; McGraw-Hill
    d. Let's Explore the City; Coronet Films
    e. Resources and Manufacturing Industries; SVE; Eye Gate
    f. Natural Resources and Industries; 139-G
    g. Other Industries of the South West
    h. Other New England Industries
    i. Major Industries Today
    j. Iron and Steel
    k. Automobiles for Millions
  2. Study Prints:
    a. Man Puts Energy to Work; #206; Walt Disney Educational Materials.

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## FINDING OUT MORE ABOUT PLANTATION LIVING

Using an encyclopedia and other books, learn about the work the following people did on a plantation. Describe what tools they needed and what their shops would have looked like. Make a drawing of one of these plantation workers at his job.

1. Carpenter
2. Blacksmith
3. Coachman
4. Stable Boy
5. Tanner
6. Dairy maid

## INDENTURED SERVANTS AND SLAVES

In your own words describe the difference between an indentured servant and a slave.

______________________________________________________________

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Unit Title: HOSPITALITY AND RECREATIONAL SERVICES

I. Unit Overview: The purpose of the unit Hospitality and Recreational Services at the intermediate level is to examine the interdependency of people working together in varying capacities. A discussion should develop within three phases of the unit:
   1. "Motels, Hotels, Restaurants." Talk about managers, doormen, clerks, elevator operators, maids, waitresses, busboys, dishwashers, indoor and outdoor maintenance crews, etc.
   2. Talk about the Zoo and its components with regard to maintenance, birds, mamals, reptiles, Art and Beauty in a Zoo, curators, headkeepers, veterinarian, superintendents, and photographers.
   3. When talking about "Beaches and Parks," develop a discussion to include National Park Service, Department of Agriculture and Forest Rangers, Leasing of land, Preservation of Wildlife, Park Rangers, Camp Counselors as supervisors of Athletic Events as well as lifeguards. Through a discussion of various phases, each provides a significant source through which it can be seen how many jobs differ in requiments as well as responsibilities.

II. Unit Content Outline: NONE

III. Unit Objectives: Viewing various occupations within the framework of Restaurants, Motels, Hotels; the Zoo; Beaches and Parks; students at the intermediate level will be able to...

   1. distinguish the duties of a ranger.
   2. label components of a park.
   3. write a story using homonyms.
   4. construct a diorama of a resort.

IV. Unit Description:

Unit Objective #1: The student will be able to distinguish the duties of a ranger.

A. Criterion-Referenced Objective:
   1. Given a list of ten duties of forest and park rangers, the students will be able to distinguish them by placing an "f" or a "p" in the blank before the listed responsibility.

B. Learning Activities:
   1. Discussion: "What is a park?"
      a. Need of park services
      b. What created the need?
      c. What kind of people are employed by park services?
      d. What kind of duties are performed?
      e. How do these services benefit me?
   2. Show a filmstrip about the forest
   3. Show a filmstrip about people working in parks.

C. Materials:
  1. Filmstrip:
    a. "Forest Conservation" 333.7
    b. "Recreation, Park, and Playground Workers." 790.68

Unit Objective #2: The students will be able to label components of a park.

A. Criterion-Referenced Objective:
  1. Given a skeletal drawing that represents an aerial view of a park, the students will be able to appropriate symbols and label the components of the map.

B. Learning Activities:
  1. Construct a model of a park and include:
    a. flowers, trees, lakes, stream, fishing, boating
    b. recreational facilities: tennis, golf course, concert pavilion
    c. tree nursery - look-out station
    d. snack or lodge area
  2. Make a map of the park
  3. Show film of a zoo
  4. Divide the class into groups- Have each group construct a house of a specific category of an animal in a zoo (reptile house, birds, Grottos, Prarie, etc.)
  5. Make a map of the Zoo students construct

C. Materials:
  1. Obtain brochures available at places such as Longwood Gardens, Philadelphia Zoological Society, etc.

Unit Objective #3: The students will be able to write a story using homonyms.

A. Criterion-Referenced Objective:
  1. Provided on experience chart that consist of ten pictures of homonym pairs; steak-stake; wood-would; pear-pare; hi-high; the students will be able to write a picture story to include each word of every pair.

B. Learning Activities:
  1. Have students prepare a list of homonyms.
  2. Allow students to use magazines, newspaper, advertisements to find homonym pairs and arrange them in such a way to make sentences.

Unit Objective #4: The students will be able to construct a diorama of a resort.

A. Criterion-Referenced Objective:
  1. Provided with an outline of specific features of a resort, the students will construct a diorama and prepare a legend as a guide to include beaches and parks, eating and lodging facilities, and a zoological garden.

B. Learning Activities:
   1. Show filmstrip "Yellowstone National Park." Discuss services provided, its location, why it is a national park.
   2. Have students make individual shadow boxes (shoe-box or other) of a park or place of wonder.
   3. Prepare a brochure telling about the features, their shadow box represents, inviting people to go there.
   4. Make floor plan of the classroom and/or school. Indicate facilities by symbols.

C. Materials:
   1. Filmstrips:
      a. "Yellowstone National Park" - 719
      b. "Our National Park Service" - 719

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Unit Title: LOCAL & GLOBAL COMMUNICATION & TRANSPORTATION

I. Unit Overview: Pupils in fourth and fifth grades, having previously been introduced to and having identified careers in the subject field, are ready to refine this knowledge and bring it into focus as to how it effects him, who as an "A" person will personally use it in making preliminary choice of a future career.

II. Unit Content Outline:
   A. Select and list careers in subject fields
      1. Select jobs
      2. List jobs
   B. Define and report
      1. Importance of careers
      2. Qualifications for jobs in specified careers
   C. Relate and refine ideas on careers by:
      1. Through "eyes" of an "A" person
         a. fill out and mail an application
         b. make and keep an appointment for an interview with a prospective employer.

III. Unit Objectives: The pupils will...
   1. select and list six careers from a series of pictures in the subject field.
   2. research, refine and report "mini" research projects and be be able to define the six chosen careers in short report which identify and relate these careers to the subject fields.
   3. relate and apply one career from the group of pictures and relate himself to that career as an "A" person, who, through a study of that career in detail will gather information on:
      a. Qualifications for job:
         1) Emotional
         2) Physical
         3) Educational
         4) Social
      b. Requirements for job:
         1) Physical
         2) Mental
      c. Application procedure:
         1) Filling in application form
         2) Making and keeping an appointment for an interview for a job with a prospective employer.

IV. Unit Description:

Unit Objective #1: Pupil will select and list, research, define and report, and then relate and apply career to himself, as an "A" person by making application for a job and reporting for an interview with a prospective employer.

A. Criterion-Referenced Objectives: The pupil will...
   1. be able to select six pictures of jobs related to communication and transportation, on the local and global scale.
   2. tell how the jobs are related to the subject field.
   3. bring in clippings and pictures related to these jobs. (Clippings could be "Want Ads" for employees in specific field.) See attached sheet. Pictures could show workers performing these tasks.

B. Learning Activities:
   1. Select six (6) pictures.
   2. Tell how pictures of jobs are related to subject field careers.
   3. Bring in clippings and pictures of chosen jobs.
   4. Details are as follows:
      a. Pupils will choose six pictures from a series on careers that relate to the subject field. He will tell how these jobs tie-in with a career in communication or transportation. He will bring in pictures of some of these occuptaions. He will explain why or why he does not think he will try one or more of these occupations someday. He will further refine the jobs as to local or global, in character and be able to locate on a map or globe the approximate location of his chosen careers.

         By the use of reference books, and other information he may locate in the library or from other sources, the pupils will do "mini-research" about his six careers (two of which should be global in scope), and be able to identify and define who the jobs relate to the career cluster!
      b. Pupils will use two or more of the following learning procedures:
         1. Reference books
         2. Books on sepcific careers
         3. Filmstrips
         4. Movies
         5. Observation of job being performed
         6. Interview with person who works at that job
      c. Pupils will perform the following objectives:
         1. Do a research project on the jobs in which he is most interested and learn in detail the qualification and requirements he needs to make application for that job.
         2. Study application forms and procedure and how to fill in an application blank.
         3. He will then fill in an application and send it to a prospective employer. (This can be accomplished by dramatizing, using the teacher as the employer.)
         4. He will make and keep an appointment with the prospective employer for a job interview.

5. Teacher will select appropriate field trips for own group.

C. Materials:
  1. Books:
    a. Children of Foreign Lands; Mimeograph series; Continental Press; Elizabethtown, PA.
    b. Dennison Bulletin Board Aids; Community Helpers and Transportation; Dennison Manufacturing Company; Framingham, Mass.
    c. Dictionaries, Encyclopedias.
    d. Library Collections of Picture Story Study Prints.
    e. Newspapers and magazines.
    f. Peabody Language Development Kits, Level 2; American Guidance Service, Inc.; Circle Prime, Minnesota.
    g. Posters giving qualifications and requirements for jobs (included in Unit).
    h. Application Blank; Aenco, Inc. (included).
    i. Help Wanted section reproduction published by U.S. Army (included).

**Unit Objective #2: The pupil will research, refine, and report a "mini" research project and be able to define the six chosen careers in short report which identify and relate these careers to the subject fields.**

A. Criterion-Referenced Objectives: Pupil will...
  1. be able to do "mini" research and make short reports on the six careers he chose; they will identify and define how the jobs relate to the subject career clusters.
  2. choose one or more learning procedures to accomplish this goal:
    a. Reference books
    b. Filmstrips
    c. Educational movies
    d. Interview (with worker from a job or different jobs)
    e. Observation of job being performed

B. Learning Activities:
  1. Pupils will have the use of reference books, visual aids, observations and interviews to accomplish the above. See Unit Objective #1.

C. Materials: Listed previously

Unit Objective #3: The pupils will relate, apply, and select one career from the group of pictures and relate himself to that career as an "A" person, who, through a study of that career in detail will gather information.

A. Criterion-Referenced Objectives: The pupils will...
  1. in the form of an "A" person, select one career from the original six (6) that he did research on and make a detailed study as to requirements and qualifications.

2. He will study application forms and procedure.
3. He will make formal application for a job by filling out a form and "mailing" it to a prospective employer.
4. He will make and keep an appointment for an interview with the same prospective employer. Acceptability will be judged by the teacher, who as the prospective employer, will either hire or refuse to hire the applicant.

B. Learning Activities:
1. Do research of career chosen and learn job requirements and qualification.
2. Dramatize applying for a job by filling in application and sending it in.
3. Make an appointment for an interview with a prospective employer.
4. Keep the appointment with the prospective employer.
5. See Unit Objective #1.

C. Materials: Listed Previously including:
1. Application form
2. Stage properties for dramatization
3. Army Publication (careers)

Some Additional Suggested Activities:

1. Make a Large Poster out of Pictures of Workers From Various Careers. Use Caption: "Can You Guess the Names of These Careers?"
2. Use Outline Maps to Locate Careers:
   a. Delaware
   b. United States
   c. Globe (Global Map)
3. List and Locate:
   a. Careers located because of geographical boundaries.
   b. Locate countries listed in Unit "Suggested Activities."
4. Field Trips:
   a. Trucking Concern
   b. T.V. Station
   c. Radio Station
   d. Post Office
   e. Airport
   f. Newspaper
5. *Countries to be Located and to Locate a Job Typical of that Country.

Norway
Sweden
Denmark
England
Ireland
Scotland
Holland
France
Switzerland
Spain

Italy
Greece
Czechoslovaki
Arabia
Russia
Alaska
Canada
American Indian
United States
Mexico

Brazil
Peru
Argentina
Congo
India
Philippines
Japan
China
Austrailia

* Teacher may use foreign countries of own choice. Global Flash cards.

Unit Title: MAN AND IDEAS

I. Unit Overview: A study of different controlling ideas in various world cultures, the development of values peculiar to each, and philosophic concepts in conflict and agreement in cross-cultural analysis to develop an awareness of the importance of the individual as a person and in an interdependent relationship with his society.

II. Unit Content Outline:
- A. Ideas
  - 1. Sources
  - 2. Affects
- B. Chinese
  - 1. The Person
  - 2. The Family
  - 3. Confucius
  - 4. Buddha
- C. Cross-Cultural analysis- similarities and differences between East and West.
- D. Hebrews Law

III. Unit Objectives: The student will...
1. be able to write about and discuss the main controlling ideas of the societies and cultures under study.
2. in group discussions, be able to compare cross-cultural controlling ideas and the reasons for their formation- where feasible.
3. be able to tell the effect of ideas upon attitudes about work.

IV. Unit Description:

Unit Objective #1: The students write and discuss aspects of controlling ideas of various world cultures.

A. Criterion-Referenced Objectives: The student will...
1. list and discuss at least two controlling ideas of three different world cultures with reference as to how these concepts affect the individual and the culture.
2. in a written report, name two societies that consider the individual of utmost importance, two that hold the State in greater value, and tell how he or she determined the philosophy of the particular culture and what he or she thinks our culture has inherited.

B. Learning Activities:
1. Use of text for background.
2. Use of library reference books.
3. View and discuss commercial movie (or T.V.) that contains topical information.
4. Art Project: Models or pictures of people who formulated or taught important controlling ideas.

Unit Objective #2: The students, in discuss, compare cross-cultural controlling ideas.

A. Criterion-Referenced Objectives: The student will...
   1. be able to name at least two controlling ideas of a culture and tell how they affect the individual, the State, and (where feasible) why these ideas were formulated.
   2. in discussion, be able to name at least two concepts of individual behavior from some other culture and tell how these same concepts affect the individual in his or her own culture.

B. Learning Activities:
   1. Text background
   2. Use of reference books
   3. Viewing appropriate film or filmstrips
   4. Viewing and discussing T.V. special programs having topical value.

Unit Objective #3: The student wills the effect of ideas upon attitudes about work.

A. Criterion-Referenced Objectives: The student will...
   1. name and explain how cultural ideas about the individual man affect (in two ways) his or her ideas about working in the world society.
   2. name a career of personal choice and tell what specific skills are necessary for competency (student-defined) in that occupation.

B. Learning Activities:
   1. The student researches and orally reports on the philosophy of a "good man."
   2. The student writes a report naming a chosen occupation and itemizes the skills necessary for the job and the effect they bear upon the difference between "doing a job" and completing a "good" job.
   3. The student interviews a worker in a skilled occupation and reports upon the advantages of specific skills knowledge.

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   Film Kare Products Co.; How People Live in the Middle East (FS-853)

Unit Title: MAN FORMS NATIONS AND LOOKS TO THE WEST

I. Unit Overview: A study of the rise and spread of certain cultures, the effect of specific environmental factors and cultural ideas upon this phenomenon, and the rapid growth of career opportunities and economic complexity as man exchanged ideas and products in inter-society communication and looks westward from Europe.

II. Unit Content Outline:
  A. Religion
    1. Islam
      a. Ideas
      b. Environmental influence
      c. Spread
    2. Latin Christendom
      a. Ideas
      b. Governmental organization
      c. Spread
  B. Conflict and Communication
    1. War- Nation- States
    2. Communication
      a. Exchange of ideas
      b. Economic Growth
      c. Inventions
      d. Career Opportunities

III. Unit Objectives: The student will...
  1. be able to write and discuss the ways new ideas and environmental factors affect economic and cultural activities of a society.
  2. be able to discuss the positive and negative aspects of how some controlling ideas are spread to other cultures.
  3. be able to discuss how the formation of nations and their economic interdependence creates on-going interchange of ideas, inventions, changing technology, and an abundance of new career opportunities as man refines his civilization- and in what ways man is demonstrating the concept of pride in accomplishemnt.

IV. Unit Description:

Unit Objective #1: Students will write and discuss economic and cultural effects of new ideas and environmental factors.

  A. Criterion-Referenced Objectives: The student will...
    1. write about and discuss at least two new ideas and two environmental factors, explaining how they affect some economic and cultural activities of the society under study.

  B. Learning Activities:
    1. Source or text book reference for background.
    2. Map study and evaluation of environmental factors influencing a specific area.
    3. Match a new idea and/or envirnomental factor with its direct result- cultural or economic.

4. View a film or filmstrip to identify specific economic activities of a particular culture.

Unit Objective #2: The students discuss the positive and negative aspects of how some controlling ideas are spread to other cultures.

A. Criterion-Referenced Objective: The student will...
   1. given one method of inter-society communication, state at least one positive and one negative aspect of spreading controlling idea by that specific method.

B. Learning Activities:
   1. Source book background reading.
   2. View appropriate film or filmstrip.
   3. Discussion: Students concepts and beliefs regarding the method of inter-society communication under study.

Unit Objective #3: Students will discuss how emerging nation-states and their economic interdependence create on-going interchange of ideas, inventions, changing technology, and an abundance of new career opportunities and in what ways man is demonstrating the concept of pride of accomplishment.

A. Criterion-Referenced Objectives: The student will...
   1. given three nation-states (or different societies), discuss at least two ideas and three new inventions and tell how they affect the relationship and interdependence of the societies.
   2. name at least five new occupations and tell how and why they are becoming refined.

B. Learning Activities:
   1. Source book background reading.
   2. View appropriate film/filmstrip.
   3. Game: Groups of students form new nation-state or society playing roles of different occupations with emphasis on career interdependence within the society and in relationship to another society.
   4. Discussion: Student selects occupation and tells in what ways he or she would improve the job for self-gratification and as a benefit to society.

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   b. Art Portrays a Changing World-Gothic to Early Renaissance; (A-428)
   c. Fourteen Ninety-Two: Part I, The Italian Renaissance; (B-200)
   d. I, Leonardo Da Vinci (B-189)
3. Field Enterprises, World Book Encyclopedia.
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   Film Kare Products Co.; How People Live in the Middle East (FS-853)

Unit Title: OUR INHERITANCE FROM THE PAST: "A Better Man Makes a Better State."

I. Unit Overview: A study of the ever-increasing complexities of social relationships, ideas, and burgeoning career opportunities as a man progresses from a basic civilization to a city-state, and formulates ideas dealing with the importance and uniqueness of the individual, the structure of the State and the interdependence of both as he organized his society along more complex economic and political lines.

II. Unit Content Outline:
- A. Greece
  1. Man's Importance
  2. Political Science- democracy
  3. Philosophy- Socrates
  4. Art-Pericles
- B. Rome
  1. Political Science- republic
  2. Law- Constitution
  3. Engineering
  4. Military
  5. Economics
  6. Religion - birth of monotheism

III. Unit Objectives: The students will...
1. be able to write and discuss the comparatively new ideas of the Greeks and relate to the uniqueness of the individual, self-government, and the aspects of beauty (Art).
2. in group discussion, be able to comparatively and analytically enumerate the changes and improvements in law and government as man progresses from the city-state concept of Greece to the growth of empire of the Romans.
3. demonstrate an awareness of career opportunities and the particular and unique skills involved by writing about and discussing the rapid growth of such fields of endeavor as law, engineering, economics, military science and religious activities as instituted by the Romans.

IV. Unit Description:

Unit Objective #1: The student will be able to write and discuss ideas of Greeks relating to the individual, government, and art.

A. Criterion-Referenced Objectives: The student will...
1. be able to write at least two paragraphs in which he or she names and details two new ideas that pertain to man as an individual and unique creation.
2. be able to list, define, and discuss five or more terms used in self-government.
3. be able to state at least three ways the Greeks showed appreciation of art and beauty.

B. Learning Activities:
1. Use of text for background.
2. View film or filmstrip dealing with subject matter.
3. Watch and orally report on commercial movie appropriate to topic or subject.
4. Use of library references for reports.
5. Art Project: Painting, building, or sculpting an example of art activities of Greeks.
6. Read national magazine special articles.

Unit Objectives #2: Students, in discussion, compare and analyze law and governmental idea changes by the Romans.

A. Criterion-Referenced Objectives: The student will...
1. demonstrate his grasp of the concept of growing complex government by naming three of more changes made by Rome, and telling why each change was brought about to benefit the society.
2. produce a report that names and compares three types of government and enumerates at least one advantage and disadvantage of each.

B. Learning Activities:
1. Text background
2. Use of encyclopedia for specific topic background
3. Dictionary use
4. View appropriate commercial movie
5. View and orally report on T.V. special related to subject.
6. Art Project: Pictures and models that symbolically represent an idea in government.
7. Use of library reference books for reports.
8. National magazine special articles.

Unit Objective #3: Demonstration of student awareness of career opportunities in new fields of endeavor instituted by the Romans.

A. Criterion-Referenced Objectives: The student will...
1. list and define at least six occupations created by the Romans.
2. discuss at least four occupations that existed in Greece, but also tell how (in two or more ways) these were made more complex by the Romans.
3. write a report that names six new careers, the particular skills of each, and tell how they are interdependent.

B. Learning Activities: #1 through 4 listed previously.
1. Art Project: Salt-flour map of Roman Empire, painted placques of famous Romans, models of specific job tools, pictures depicting various occupations.
2. Game Project: Create a "Roman Empire" in the classroom in which members play different roles of particular skills illustrating relationship and interdependency of the whole and its parts.

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   c. Ancient World Inheritance (004)
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   e. Ancient Greece (251)
   f. Decline of the Roman Empire (A-105)
4. Filmstrips:
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      Ancient Civilization: Greece; (K-21)
      Ancient Civilization: Egypt; (K-22)
5. Field Enterprises; World Book Encyclopedia

## Unit Title: MONEY MANAGEMENT AND CONSUMERISM

I. Unit Overview: This unit will examine the need for a monetary system as a medium of exchange. It will expose students to basic economic principles that influence his ability to acquire goods and services. Because advertising plays such an important role in our economy, the students will examine various techniques and methods used by marketing agencies.

II. Unit Content Outline:

A. Money Management and Consumerism
  1. History of money
    a. Trade/barter
    b. Early monetary systems
  2. Income
    a. **Work**
      (1) importance of work
        (a) supplying basic needs
        (b) supplying luxuries
      (2) Investments
        (a) savings accounts
        (b) stocks and bonds
        (c) property
  3. Advertising
    a. Definition--appeal to senses to sell a product
      (1) puns
      (2) alliteration
      (3) metaphor
    b. Techniques
      (1) bad names--glad names
      (2) bandwagon
      (3) glittering generalities
      (4) transfer
      (5) testimonial
      (6) plain folks
  4. Consumerism
    a. Budgeting income
      (1) family
      (2) community
    b. Competition
    c. Supply and demand
    d. Cost and quality comparison
    e. Credit

III. Unit Objectives:

1. The student will be able to compare and contrast early monetary systems.
2. The student will be able to discuss the importance of work in supplying basic needs and luxuries.
3. The student will be able to identify various work roles that interest him.

4. The student will be able to compare and contrast various methods of investment as a source of income.
5. The student will be able to discuss various techniques and methods of advertising.
6. The student will be able to state factors which influence his buying power and shopping habits.

## IV. Unit Description:

Unit Objective #1: The student will be able to compare and contrast early monetary systems.

A. Criterion Referenced Objectives:
   1. The student will be able to define the terms trade and barter.
   2. The student will be able to prepare reports on early monetary systems.

B. Learning Activities:
   1. Ask each child to bring a toy or play thing to school. Encourage them to bargain and trade for them among themselves. Ask each to give reasons for making the trades. Discuss the concept of trade and commerce.
   2. Prepare reports on early monetary systems.

C. Materials:
   1. Filmstrips: Dollars and Cents--Filmstrip House
      Why We Use Money: The Fisherman Who Needed a Knife. Learning Corporation of America.
   2. Transparencies: Learning About Money and Coin Combinations. (27 in a set) 3M Company

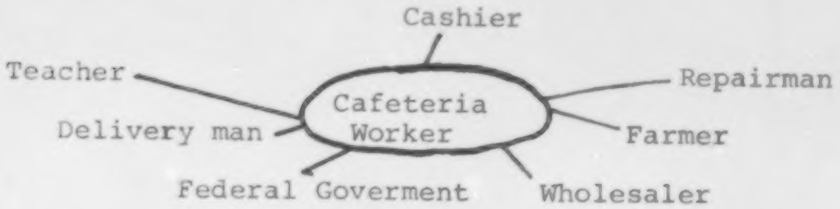
Unit Objective #2: The student will be able to discuss the importance of work in supplying basic needs and luxuries.

A. Criterion-Referenced Objective:
   1. The student will be able to participate in a debate on the advantages of having a job.
   2. Given a list of items, the student will be able to differentiate between needs and luxuries.

B. Learning Activities:
   1. On an out line map of the Unites States, the students can place major occupations where they belong i.e. lobsterman, cotton picker, cattle rancher, lumber jack, oil driller, textile worker etc.
   2. Have students make a comparison list of that they could do. If I had a job------------If I didn't have a job.
   3. At the top of a paper, have students write "My Resources." First make a list of human resources. Write down what they know how to do....then write down the means of people you know who may be helpful to you. Second, have students make a list of things they have that might be:

a) What skills do you have?
b) What skills do your friends or family members have?
c) What tools do you have (bike, wagon, needle, thread)?
d) What tools do people who will help you have?

4. Interview...family members to find our benefits that work provides the family; make a chart of these.
5. Write letters to different companies to find our benefits offered to family i.e.: health, recreation, investment, etc.
6. Use Sears or Montgomery Ward catalog etc. to list all items they think they want. Ask,..how will you be able to buy these things...?
7. Choose a worker and using newspaper and yellow pages, make circle charts showing interdependence.



8. Interview someone who holds a job to determine reason...survey parents to find out what kinds of jobs are held.
9. Problem solving-"What would you do with a 3 day week?
10. Make a bulletin board of Needs and Luxuries.

C. Materials: Filmstrips:
   1. What is a Job? A778-3 SVE
   2. What do you like to do? A778-2 SVE

Unit Objective #3: The student will be able to identify various work roles that interest him.

A. Criterion-Referenced Objective:
   1. After looking through want ads the student will be able to list five jobs which interest him.
   2. Having stated an interest in a certain occupation, the student will be able to write a paragraph describing that occupation and why it interests him.

B. Learning Activities:
   1. Look through want ads-list 5 jobs of interest- Write paragraphs stating why interested in each.
   2. Collect want ads from newspaper. Notice which ads keep repeating. Comparison made as to jobs that

have been filled and those that haven't.
List reasons why.

3. List workers whose salary is partly paid by tips.
4. Identify and list people who use a lot of coins in the performance of their jobs. Prepare questions and interview at least one of these people.
   What coins are received most?
   What coins are given most?
   List effects of time of day, day of week, age of customer on kinds and amounts of coins collected.
5. Set up a simulated business i.e.: clothing store, grocery store, bicycle shop. Answer the following.
   a) Who would buy your product?
   b) What brands would be sold?
   c) Number of people you would employ.
   d) What occupations or industries would supply your business?
   e) Types of advertising you would use.
   f) Location of business.
6. Look through the want ads or yellow pages and complete the following chart.

| Name of Job | Job Description | Education Required | Experience Needed |
|---|---|---|---|
| Salary | Fringe Benefits | Advancement Possibilities | How to contact employer |

7. Answer the following questions then look through want ads and yellow pages to find jobs that would correspond with your interests.

I like to work with machines.
I like to do things where I can move around.
I like to do things with my hands.
I like to try to do new things.
I like to make up new songs.
I like to build new things.
I like to be indoors.
I like to be outdoors.
I like to draw pictures.
I like to talk to people.
I like to be by myself.
I like to help people.

8. Write a letter to the Chamber of Commerce in an area where they would like to live inquiring about job opportunities. Follow-up with living and working in ____________________________(short story).
9. Creative writing (Fictional)
   a. Barber in a hippy commune
   b. Elf at North Pole
   c. Sandman in Sahara
   d. Lizard catcher in desert
   e. Grape stamper in Italy
   f. Bananna picker in Haiti
   g. Ski instructor in the Alps
10. Write to the telephone company from various sections of the country and request copies of telephone books. Compare occupations listed in yellow pages across the country. Given a chosen occupational interest are there certain areas of the country where it would be impossible to find a job.

C. Materials:

1. Filmstrips:
   a. What are Job Families? A778-4 SVE
   b. Series: Fathers Work, Churchill Films
      Mothers Work Too, Churchill Films
      Some Neighborhood Helpers, Eyegate
      Workers for the Public Welfare, Eyegate
      Education for Occupations, Eyegate
   c. Careers: Unit Scholastic Book Company

Unit Objective #4: The student will be able to compare and contrast various methods of investment as a source of income.

A. Criterion Referenced Objectives:
1. The student will be able to state the definition of savings accounts, stocks, bonds, property.
2. The student will be able to gather data and report on how investing adds to a family's income. At least 3 different kinds of investments should be included in the report.

B. Learning Activities:
1. Save newspapers throughout the year. Examine real estate ads to see how prices increase for homes in a certain area.
2. Compare house prices with features desired in a house.
3. Have a real estate agent come to class to discuss property as an investment.
4. Some games can be utilized: i.e. Ticker Tape, Monopoly, Easy Money, etc.
5. Plan a bank and draw a floor plan. Make sure there are places for all the necessary workers.
6. Take a field trip to a Mint. Discuss where bills are made. Write a United States Treasury for information.

7. Use the financial page of the newspaper to study market quotations and work problems:
   a. Choose one block of stock and follow it for a given length of time.
   b. Pretend you purchased ten shares of a certain stock. Each day compute percentage of profit or loss.
   c. Imagine you have $1,000 to invest. Buy shares of your favorite stock. Watch stock tables for a given time. Determine whether investments have grown or shrunk.

Unit Objective #5: The student will be able to discuss various techniques and methods of advertising.

A. Criterion Referenced Objectives:
   1. Given newspaper and magazine advertisements the student will be able to classify them according to techniques listed in outline (.2).
   2. Make a scrapbook of original advertisements making use of puns alliteration metaphors and techniques listed in outline (.2).
   3. Have students list their hobbies. Hypothetically give each child $10. They are to tell what and where they would buy. Make posters advertising their hobbies.
   4. Investigate a product. Write an advertisement for it. What technique did you use?
   5. Write an advertising firm inquiring about job opportunities in this industry. Make a bulletin board of the results.
   6. After seeing and hearing advertising commercials, tell whether their claims are true or merely propaganda. (Example: Heinz is the slowest ketchup in town. Test different brands against Heinz to prove or disprove claim).
   7. Give an oral report on the importance of advertising.
      a. to the paper
      b. to the advertiser
      c. to the consumer
   8. Clip advertisements. Classify according to the following propaganda devices:
      a. best in the world
      b. no other like it
      c. all doctors adivse this
      d. just like Mother's
   9. Design posters to advertise jobs in different parts of the world.
      a. Sponge diver in Greece
      b. Cigar maker in Havana
      c. Oyster man in Chesapeake bay
      d. Hat maker in Panama
      e. Hula dancer in Hawaii
      f. Sugar cane producer in Central America
      g. Banana picker in Haiti
      h. Olive picker in Spain
      i. Fur trapper in Siberia
      j. Ski instructor in Alps
      k. Grape stomper in Italy

Unit Objective #6: The student will be able to state factors which influence his buying power and shopping habits.

A. Criterion Referenced Objectives:
  1. Given X amount of dollars, the student will be able to budget a family income for a month.
  2. The student will be able to list five areas of expense in a community budget.
  3. The student will be able to cite examples of competition between manufacturers.
  4. The student will be able to write a paragraph on how the principle of supply and demand affect the cost of goods.
  5. Given a certain item to buy, the student will be able to list his reasons for choosing one product over another.
  6. The student will be able to state the advantages and disadvantages of credit buying.

B. Learning Activities:
  1. Plan a survey of people in school or home and find out what they have bought or sold for $1 or less in the past week. Make a graph of results.
  2. Play "Let's Make a Deal."
  3. Have a class auction.
  4. Collect menus from restaurants. Compare for prices at different restaurants.
  5. Examine newspapers...make a chart "Bargains for the Week."
  6. Make a circle graph budgeting allowance for the week. Expand this and have students discuss with parents monthly budgets. Graph a budget for a family income.
  7. In small groups, describe places you can spend $2... list places (restaurants, post offices, movies, skating rinks, dime store). Examine each as to what they would purchase and tell what workers they would meet. Mural results.
  8. Post large diagram of typical city. On strips of paper, print banker, manufacturer, department store owner, theater owner, small store owner, snack bar owner, etc. Each pupil places on the diagram where he/she thinks would be the best place to set up business and tells why.
  9. Clip out from magazines those articles showing products they can or can't afford given a certain income. Change incomes to see how buying power changes.
  10. Clip out grocery ads from paper and bring to class. Write up a shopping list of things for week. Compare prices of each store based on needed articles to determine what store would be most economical to shop at.
  11. Have children make cookies, keep records of ingredients used, time spent, price of materials, numbers of people to determine why some articles are priced higher than others, i.e., frozen, fresh canned corn.
  12. Individual field trip down grocery aisle to determine why some articles are priced higher than others, i.e., frozen, fresh canned corn.

13. Using hobbies, give child $10 in play money. He is to tell what he would buy for his hobby and where he would buy it. He can make posters advertising his hobby. See #5 objective, activity #3.
14. Use advertisements and photographs to help define and illustrate economics terms such as: producer, consumer, services, goods, division of labor.
15. Analyze the following installment plans. How much money is the buyer paying in order to buy on the installment plan?
    a. A car is advertised for $2,160 or $2,246, with sales tax and license. The salesman says the buyer needs to pay $64/month for 48 months.
    b. A new speed boat, with all equipment and sales tax included, is advertised at $1,650. The ad says that the boat can belong to the buyer for $54/month for 36 months.
    c. A house is advertised for sale for $20,000. The buyer of the house can pay $161.05/month for the next 25 years.
16. Here are 6 different market conditions. Analyze each of them as an economist might. For each, tell whether supply is low or high compared to demand. Then make predictions. Will the price be set higher or lower? Will it probably remain as it is?
    a. A department store has 2 color TV sets before Christmas. Many people in town want TV sets.
    b. A department store has 15 color TV sets in stock when the new models came out.
    c. A rancher has the only 10 horses for miles around. A movie producer needs 20 horses of a movie he is shooting.
    d. A rancher has 20 horses he wants to sell. People don't often go as far off the main road as his ranch to buy horses.
    e. Two buyers of oranges come to a town where there are 100 crates of oranges for sale. Each wants 100 crates.
    f. One buyer of oranges comes to a town where there are 400 crates of oranges for sale. The buyer wants only 100 crates.
    g. Think of ways the rancher with 20 horses could create a demand for his horses. Would he have any costs in creating a demand.
17. Invite a guest speaker from local government, i.e., city manager, county executive, etc., to discuss local budget and allocation of funds.
18. Students can visit city or county office buildings to see budget planning meetings or pick up official copies of budgets.
19. Have students use newspapers and magazines to collect ads for 1 kind of product, i.e., shampoo. Compare and contrast manufacturers prices, advertising and quality.
20. Make a class catalog similar to those seen in catalog stores.
    a. Interview friends to find out items most often purchased. This will help you decide what to put in the catalog.

- B. Make a list of things people want. Find a good way to group these things in your catalog.
- c. Research to find appropriate prices of each item.
- d. Draw a picture and write a brief description of each item.
- e. Make order forms for your catalog.

C. Materials:

1. Filmstrips
    - a. Learning to Use Money Wisely, SVE, F801-2
2. Kits
    - a. Consumerism Kit, Scholastic Book Company

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Unit Title: PEOPLE MANAGE THEIR RESOURCES TO SATISFY THEIR NEEDS AND WANTS.

I. Unit Overview: This unit will extend the study of natural resources to the fulfillment of man's need and wants. It will stress the interdependence of man as a producer and consumer in a complex economic society. Man's need to earn money is developed together with factors governing his choice of occupation.

II. Unit Content Outline:
  A. Man's Needs and Wants:
    1. Food, clothing, and shelter are basic needs.
      a. Related to climate
      b. Related to available resources
    2. Man Wants the Good Things in Life:
      a. Individuals and groups strive to acquire conveniences and luxuries.
      b. Wants are endless and always changing.
    3. Man was self-sufficient when he lived in a simple society.
    4. Complex societies require interdependence of people.
    5. Man is both a producer and consumer of goods and services.
  B. Man as a Producer:
    1. Work is necessary to provide for needs and wants.
    2. All work is valuable and necessary as part of our economic system.
    3. Man has freedom to choose his job.
      a. Choice may depend on his interests (planning to become what you want to be).
      b. Choice may depend on the skills he is capable of acquiring.
    4. Effects of the Industrial Revolution.
      a. Division of Labor enables man to produce more goods.
      b. Mass production vs. individual craftsman.
  C. Man as a Consumer:
    1. Prices paid for goods and services are influenced by supply and demand.

III. Unit Objectives: The student will be able to...
  1. identify the basic economic needs and relate them to differences in environment.
  2. discuss the endless variety of wants, the impossibility of satisfying all of them, and the necessity for making choices.
  3. compare the way people in a modern society depend on each other for their basic needs and wants with the self-sufficiency of a more primitive society.
  4. explain, with examples, why work is necessary to provide for human needs and wants as well as a means of deriving personal satisfaction and reward.
  5. state the differences between man as a producer and a consumer.
  6. distinguish between goods and services.

7. The student will be able to identify the factors governing man's choice of a job.
8. Given a particular industry, the student will be able to research and then explain how division of labor has resulted in man's being able to produce more goods and services.
9. The student will be able to speculate on the changes future technological advances may make in the way we live and work.
10. The student will be able to explain how prices paid for goods and services are influenced by supply and demand.

IV. Unit Description:

Unit Objective #1-a: The student will be able to identify the basic economic needs and relate them to differences in environment.

A. Criterion-Referenced Objective:
   1. The student will be able to name the three basic economic needs and differentiate between these needs and wants.

B. Learning Activities:
   1. Aside from air, make a list of the things all people absolutely need in order to live. Arrange the items that go together into groups. Make a poster illustrating these needs with pictures cut from magazines. Give your poster a title.
   2. Make another poster like the one above but list only those things people want to have, but which are not necessary for them to live. These might be things to make life more comfortable of enjoyable. Give this poster an appropriate title.
   3. Plan a back-packing three-day camping trip. What would you bring along? Remembering that you have to carry your pack, how did you decide what to include.
   4. Design a bulletin board to illustrate "We need--" "We want--"
   5. Interview a senior scout. You want to know about survival tactics. Report to the class.
   6. Ask a father who was actively engaged in the war in Viet Nam to visit the class and describe the basic supplies he was provided with.
   7. Read a book about an Arctic or Antarctic explorer. What did he take with him in order to survive?

C. Materials:
   1. Poster paper
   2. Crayons, paints, markers, etc.
   3. Magazines or mail order catalogs
   4. Resource Persons:
      a. Boy scout
      b. Father who had been engaged in combat

Unit Objective #1-b: The student will be able to identify the basic economic needs and relate them to differences in environment.

A. Criterion-Referenced Objective:
   1. The student will be able to contrast the fulfilling of basic economic needs of people living in two different climatic regions.

B. Learning Activities:
   1. Select a group of people living in either a hot-dry, hot-wet, or cold climate and research their fulfilling of food, clothing and shelter needs. Show how the climate affected the type of food, clothing and shelter each used.
   2. Make a mural illustrating the above. Present it to the class for discussion.
   3. Pretend that you live in one of the above climates and have invited a friend to spend a vacation with you. Write the letter telling him what kind of climate to expect and what types of clothes he will need. You should include the average rainfall or lack of it. Be sure to observe correct letter writing form.
   4. Invite a resource person to your classroom who has lived or visited in a different climate. Write the letter giving him some ideas of what you would like to know. Then with the help of your classmates, prepare a set of questions to ask when he comes. Follow up with a discussion period and drawings from the members of the class. Make a bulletin board using the drawings and other illustrations available.
   5. Write a thank you letter to your resource person mentioning a few facts you found interesting in his talk.

C. Materials:
   1. Study Prints:
      a. Climates of the World Series
      b. Family Life Around the World Series
      c. Children Around the World Series
   2. Magazines:
      a. National Geographic selected articles
   3. Resource Person:
      a. Native of a land typical of area discussed or one who has visited.
   4. Filmstrips:
      a. Living in Mexico Today
      b. Living in South America Today

Unit Objective #1-c: The student will be able to identify the basic economic needs and relate them to differences in environment.

A. Criterion-Referenced Objective:
   1. The student will be able to contrast the use of natural resources as they meet the needs of people living in two different natural resource regions.

B. Learning Activities:
1. Choose two very different natural resource regions such as Alaska and Hawaii, Saudi Arabia and Norway. Find out the natural resources of each. Make a poster illustrating these natural resources.
2. Show how each of these regions provided the basic needs of people before the days of good transportation. Do the people of these regions still depend on their own resources to provide all of their needs? What additional uses do they make of their natural resources today?
3. Pretend that you were a pioneer in one of these regions of the U.S. Show how you might satisfy your needs with natural resources around you.

   Nebraska
   Chesapeake Bay area of Maryland
   Maine
   Mountains of West Virginia
   Mississippi
   Wyoming

   Write up what you have learned in the form of a diary. Be sure to include days from each part of the year. To do this you will have to know something about the climate and how this may affect the natural resources and your use of them.
4. Choose two filmstrips and write about what you have learned from them as it relates to the objective above.

C. Materials:
1. Filmstrips:
   a. Adventures of the Wilderness Series
   b. America: people, products, resource series
   c. U.S. Regional geographic series.
2. Magazine; National Geographic
3. Reference:
   a. Encyclopedias
   b. Selected books on the specific area

Unit Objective #2-a: The student will be able to discuss the endless variety of wants, the impossibility of satisfying all of them, and the necessity for making choices.

A. Criterion-Referenced Objective:
1. The student will be able to explain why man's wants are different and why he cannot satisfy all of them but must make choices.

B. Learning Activities:
1. From a mail order catalog, pick five items you want very badly. Calculate their cost. Compare your list with those of other children. What are the similarities and differences? Compare the cost. What plans could you make for acquiring these items? If you were not limited to five, could you think of other items you might like to have?
2. Ask each member of your family about the things each one wants most and compare. How do you account for the differences (if any)?

3. Ask parents to list 3 *family* wants and ask for suggestions or plans as to how they hope to satisfy these wants?
4. Make a collage of the most desirable items you can think of. How many items did you use? Do you ever hope to satisfy all of them? Write about it.
5. Pick two items from #4, above, and tell how you plan to acquire them this year.
6. Make a survey of the class, asking for each student's three most desired wants. Try to organize them into groups such as food, clothes, toys, musical instruments, etc. Graph your results. Present your graph to the class and draw conclusions from it.
7. Pretend that your family has a hundred times the income it now has. How would it affect your wants? Could you now have everything you ever wanted? How would it affect the clothes you wear, the house you live in, the food you eat?

C. Materials:
1. Collage supplies
2. Graph paper
3. Reference Material:
    a. article on budget making
4. Film:
    a. We make choices

Unit Objective #2-b: The student will be able to discuss the endless variety of wants, the impossibility of satisfying all of them, and the necessity for making choices.

A. Criterion-Referenced Objective:
1. The student will be able to write a paragraph on each of two resources such as water, electric power, forests, oil, etc. explaining why diminishing of these resources limits satisfication of our wants in the production of goods involving their use.

B. Learning Activities:
1. What examples of water pollution do you find in Delaware? Your parents may be able to help you. Some back issues of *The Morning News* or *Evening Journal* will be available as will items on the bulletin board. How could these events affect your life?
2. List the things you and your family could do to conserve water. Read your water meter (parent can help you do this) and record the amount each day for a week. Find the amount used each day and make a graph of the results. Remember that the meter records cubic feet. See if you can use the following facts to help you change cubic feet to gallons:

1728 cu. in. = 1 cu. ft.
231 cu. in. = 1 gal.

3. Interview a supermarket manager about how rumors of shortages of paper products could affect his store. Report to class. If this is not possible, write to Scott Paper Company in Philadelphia asking for this information. Be sure to tell them why you want this information.
4. More and more toys are being made of plastics. Previously these were made of wood and metal. Do they last as long now? Ask your parents to help on this one. You might write to one of the big lumber producing companies such as Weyerhauser and ask why wood is not being used as much for toys.
5. Select one of these topics and show how the event could affect satisfaction of a need or want. Then report to the class on your findings.
   a. pollution results in fish kill in Delaware Bay
   b. brownout in Delaware Valley
   c. iron ore workers on strike
   d. accidents close coal mines
   e. rubber plantation attacked by new virus
   f. 200,000 acres of California forest destroyed by fire

C. Materials:
   1. Back issues of newspapers, news magazines

Unit Objective #3-a: The student will be able to compare the way people in modern society depend on each other for their basic needs and their wants with the self-sufficiency of a more primitive society.

A. Criterion-Referenced Objectives:
   1. Using a primitive society as an example, the student will be able to enumerate the various ways a family gets its food.
   2. Using his family as an example, the student will be able to enumerate the various ways his family gets its food.

B. Learning Activities:
   1. Choose a primitive society such as early man, the Eskimo, and African tribe, etc. and using an encyclopedia or appropriate book, investigate the way these people provided food for their family. Make a series of drawings to illustrate this and be ready to discuss it in class.
   2. Discuss with your family various ways in which the family is provided with food. Make a list of the stores in which y  buy each type of food. Make a poster with cut-outs from magazines or newspapers indicating in which store each food is sold.
   3. Interview a food store or restaurant manager and ask about how he orders the food he sells. Make a list of the jobs involved in getting the food to the store.
   4. Cut out from magazines and newspapers illustrations of food that are processed when you buy them (such as frozen foods or canned foods) and foods that are not processed (such as fresh produce). Use an encyclopedia to find out

how one type of processed food is produced? How many different kinds of jobs are involved?

5. Make a table such as the one below and list the foods used by your family in one week. Give it an appropriate title.

| Processed foods | Fresh products (purchased) | Fresh products - home grown, caught or raised |
|---|---|---|
| | | |

Which part of your table most nearly compares with what you found out about the way man is a primitive society gets his food? If your first two lists are the longest, what conclusion do you draw from this as to how self-sufficient your family is getting its food?

C. Materials:
1. Newspapers and magazines
2. Drawing and poster materials
3. Books:
   a. Encyclopedias
4. Pamphlets:
   a. Durum Macarone
   b. Products from Farm to Table
5. Resource Persons:
   a. Food store or restaurant manager
6. Filmstrips:
   a. Before the white man
   b. How we get our foods series
   c. Pioneers
   d. Prehistoric man through River Culture
   e. Working in U.S. communities: old Sturbridge & Mystic Seaport

Unit Objective #3-b: The student will be able to compare the way people in modern society depend on each other for their basic needs and their wants with the self-sufficiency of a more primitive society.

A. Criterion-Referenced Objectives:
1. The student will be able to explain the making of clothing in a primitive society of his choice, and will be able to state the sources of materials used.
2. The student will be able to explain the way his family acquires its clothing and will be able to state the sources of materials used.

B. Learning Activities:

1. Choose a primitive society such as you chose in the last lesson and with the help of an encyclopedia or appropriate book, find out how clothing was made and from what raw materials.
2. Trace an article of your clothing from the raw material to the finished product. Make a flow chart to illustrate this.
3. Take a survey of labels from the clothing in your family and list the fiber content. If there are no labels, ask your mother to help. How does this list compare with the raw materials used by the primitive society? How do you account for such a wide variety of materials in modern clothing.
4. Set up a committee of 6 or 7 to design a bulletin board illustrating the various kinds of material available in modern clothes. Use real swatches if possible. Parents can help on this project.
5. Take a poll of your classmates, noting the parents who make their own and/or their children's clothes 1) often, 2) sometimes, 3) never, and graph the results. Show the graph to the class. What conclusions can be drawn from the results?
6. Using a pattern, make a simple article of clothing such as an apron. Be able to determine the amount of material needed by reading the chart on the pattern. Follow the direction given for layout, assembling, and sewing the article. How did your operation differ from the mass production operation you observed in #2?
7. Dress a doll as a child might be clothed if he/she lived in a primitive society, or bring in a doll already dressed this way. Be prepared to show your model and contrast its clothing with that of a modern doll of your own.
8. Read about how shoes are made. Find an old shoe and cut it apart to show the class the materials involved in its construction. How do shoes today differ from those made by pioneers two hundred years ago? Which required more workmen? Which required more time to make?
9. Investigate the type of footwear an Indian might wear. An Eskimo. A desert tribesman. How are each adapted to the environment in which they live? What raw materials were used? What workers were involved?
10. Make a poster illustrating with actual material, the kinds of fabrics clothing are made out of today. Label them as to their origin (animal, vegetable, synthetic).
11. Interview a dressmaker (could be your mother). You will want to have a ready set of questions. You might include these: Why do people have clothes made when they are easy to buy? If she is a professional dressmaker, how do her prices compare with ready made clothes? What skills does a dressmaker need? How does she know what size you are in order to purchase patterns? (Ask her to demonstrate measuring for size) What are the advantages of making clothes for your family?

C. Materials:
  1. Patterns and materials
  2. Poster materials
  3. Selection of fabrics
  4. Shoe
  5. Doll
  6. Resource persons:
    a. dressmaker
    b. clothing factory worker
    c. shoemaker
  7. Books:
    a. Lazarus, H.; Let's Go to a Clothing Factory
    b. McCall; How We Get our Clothing
    c. Shannon, T.; About Ready to Make Clothes
  8. Filmstrips:
    a. America: People, Produce Resources series
    b. How We Get Our Clothing
    c. Prehistoric Man Through the River Cultures
    d. Working in U.S. Communities: Old Sturbridge & Mystic Seaport

Unit Objective #3-c: The student will be able to compare the way people in a modern society depend of each other for their basic needs and wants.

A. Criterion-Referenced Objectives:
  1. The student will be able to explain the construction and raw materials involved in the houses of two primitive societies, and will be able to state the way in which the houses are adapted to the environment.
  2. The student will be able to explain simply the materials used, workmen involved, and the basic plan of his own house and show how it is adapted to the environment.

B. Learning Activities:
  1. Choose a primitive society and construct a model, or make a drawing of a typical house. Be able to explain the materials and workmen involved and tell how the house is suited to its environment.
  2. Ask your father or older brother to help you make a list of the most important materials used in the construction of your house. Note which of these are natural ones, and which are manufactured.
  3. Observe the construction of a home in your neighborhood. Make a list of some of the workmen you have observed on the construction site. Think of some of the workmen you have observed on the construction of a primitive house.
  4. Interview the custodian of your school. Ask him to explain the way the school is heated and air conditioned. Compare this with the way your primitive house is heated and air conditioned. Ask the custodian about how many people are involved in the heating of the school. How does the environment affect the need for heat and/or air conditioning?

5. Invite a parent who is in one of the construction industries to speak to your class about his part in the construction of a house and what skills he must have to do his job.
6. Investigate the way water is brought into your home. Make a simple diagram to show this. How was this done in a primitive house?
7. Make a floor plan of your house, and another of a primitive house. How are they similar and how are they different? Bring in a blueprint or architect's drawing if one is available. Why is it necessary to have these before your house is built?

C. Materials:
   1. Blueprint
   2. Samples of building material
   3. Filmstrips:
      a. Planning the Home
      b. Building the Foundation
      c. Building the Shell of the Home
      d. Finishing the home
      e. Indian homes
      f. Before the white man
      g. The colonial era
   4. Films:
      a. African Village Life
      b. Economic Geography: comparing two nations

Unit Objective #4: The student will be able to explain, with examples, why work is necessary to provide for human needs and wants as well as a means of deriving personal satisfaction and reward.

A. Criterion-Referenced Objectives:
   1. The student will be able to explain and cite examples of how work has always been necessary to provide for human needs and wants.
   2. The student will be able to explain how work can be a means of personal satisfaction and reward.

B. Learning Activities:
   1. From your investigation of man in a primitive society, show how his survival depended on his ability to do work.
   2. Interview your father or some other adult. What is his job? Why does he work? What does he consider an adequate income for his family? If he lost his job, how would this affect the family's needs and wants?
   3. If you get an allowance, what do you do to earn it? How do you spend it? What would happen if it were cut off?
   4. Make a list of the ways you could get some of the items you want which your family doesn't provide.
   5. Interview your mother. Find the answers to these questions: If she does not work outside the home, does she find that what she does necessary and valuable to the family? What is a typical day like at home for her? If she does work outside the home, why does she?

6. Take a poll of your class as to the occupations of their parents. Group like occupations together such as clerks, factory workers, construction workers, etc. Make a table and then a graph showing these facts.
7. Look through the want ads in a newspaper. Cut out ads for those jobs paying $7,600 or more. This amount is thought to be the minimum a family of four can live on. Make a table such as this:

| Salaries | Less than $7,000 | $7,000-$10,000 | $11,000 & up |
|---|---|---|---|
| Jobs | | | |

8. Have a committee plan a money making scheme for some need or want of the school-- perhaps to finance a camping trip. How would you arrange the jobs so that each member would do his share? What kinds of jobs would be necessary to carry out this operation.
9. Interview three adults. Find out whether they get some personal satisfaction from the work they do and why. Report to your class.

C. Materials:
   1. Newspapers
   2. Graph paper
   3. Resource persons:
      a. Mother/father

Unit Objective #5: The student will be able to state the difference between man as a producer and as a consumer.

A. Criterion-Referenced Objective:
   1. The student will be able to state the difference between man as a producer and as a consumer and give three examples of each in his own family or community.

B. Learning Activities:
   1. You have already listed in the previous lesson the goods produced by members of your family. Now make another list showing what goods and services each member uses in a typical day. Be sure to include the goods and services you use in school, going to and from school, and after school.
   2. Take a typical shipping center such as Chestnut Hill Plaza or Castle Mall. Indicate for each store some of the items you could buy there.
   3. Use Data Pack #6 to learn steps in the production and consumption of a product.

C. Materials:
   1. Data Pack #6 Producing goods

Unit Objective #6: The student will be able to distinguish between goods and services.

A. Criterion-Referenced Objective:
   1. The student will be able to state the difference between goods produced and services rendered by member of his family communit and give three examples of each.

B. Learning Activities:
   1. Using Hold Databank System Data Pack #5- Goods and Services, distinguish between these.
   2. Look through the advertisements in the newspapers, make a collection of ads showing goods, and another of services offered. Arrange these on poster with appropriate title. Show to your class.
   3. List the members of your family and under each list the goods produced by each and the services rendered by each. Compare with list of a classmate.
   4. Make a plan of the stores in a small shipping center in your neighborhood such as Brookside Shopping Center or Chestnut Hill Plaza and identify for each store whether it provides goods or services to the community.

C. Materials:
   1. Data Pack #5 Goods and Services
   2. Newspapers and magazines

Unit Objective #7: The student will be able to identify the factors governing man's choice of a job.

A. Criterion-Referenced Objective:
   1. The student will be able to give examples of how man's choice of a job can depend on his interest and his ability to develop the necessary skills.

B. Learning Activities:
   1. Children will list on cards the things they do best. Arrange a file of "Skills Available" so that children who need help or who would like to develop other skills can draw on those who can give it.
   2. Read a story of a famous person such as Edison, Carver, Audubon, etc. to see how his career developed out of his special interest
   3. Read a fairy tale such as "King Midas and Golden Touch." Discuss the difference between what is real and what is pretend in the acquiring of your needs and wants.
   4. What skills that you have learned in school, or would like to learn, could help you in a career such as:
      Salesman
      Architect
      Bookkeeper
      Mother of a family
      Prefessional athlete
      Writer
      Mechanic
      Farmer
      Cashier
      Any other career you can think of

5. Demonstrate to the class a skill you have such as:
   a. Fixing a flat tire on your bike
   b. Drawing a human figure
   c. Knitting or crocheting
   d. Drawing a cartoon
   e. Paper folding
   f. Making a birdhouse
   g. Solving a crossword puzzle
   h. Taking care of a classroom animal
   i. Juggling
6. Pick out a job you think you would like. Use the library to find out how you could qualify for it. What skills would you need? What kind of special education? How could you start planning now for this job? In your experience with the want ads in the last lesson, did you notice this job listed? If so, what qualifications did the ad mention?
7. Interview someone who has a job such as you want. What qualifications did he need? Ask about the advantages and disadvantages of the job. How did he prepare for the job? Report to the class.
8. Do you know someone who never finished school? Interview him as to how satisfied he is with his job. Does he ever wish he has planned more carefully during his school years? Would he do things differently if he had to make his choice today? How could he prepare himself for a better job now?
9. Think of a job you have been asked to do at home or at school which you did not have the skills to do well. Write about your feelings.
10. What skills would you need if you hoped to make money doing these jobs. Pick out five to investigate. Who could you ask to help you learn the necessary skills?
    Mowing lawn
    Taking care of your neighbor's animal while he is on vacation
    Babysitting
    Running a paper route
    Selling greeting cards or some other article
    Making an article to sell such as a potholder
    Weeding a garden
    Tutoring a friend or younger child
    Washing windows
    Helping your dad at his job
    Washing the car

C. Materials:
1. Books:
   a. King Features Career Awareness Program (series of comic books)
2. Film:
   a. Work around the world
3. Filmstrip:
   a. Career Awareness Scholastic Diminsions: Careers

Unit Objective #8: Given a particular industry, the student will be able to explain how division of labor and mass production have resulted in man's being able to save time and money in the production of goods and services in less time and at a lower cost.

A. Criterion-Referenced Objectives:
   1. Using a particular industry as an example, the student will be able to explain how mass production has resulted in man's being able to save time and money in the production of goods and services.
   2. Using a particular industry as an example, the student will be able to show how division of labor results in increased goods and/or services.

B. Learning Activities:
   1. Choose two items in your home such as a bowl, a basket, a candle, a piece of dress material, a cooking pot, a tool, etc. and show how it was produced in colonial days. Be sure to note the number of workers involved in the production of each and the amount of time needed to produce the article.
   2. Pick one of the items above and with the help of an encyclopedia or suitable book, show the steps needed to produce that article today. What workers are involved. How many pieces can be produced a day?
   3. From your work in the two activities above, can you list the advantages of having a product made by a single craftsman as compared to the same produce mass produced? What are the disadvantages? Read an article on mass production to help you.
   4. Read a story about Henry Ford and his introduction of the assembly line in the automobile industry. How did this new idea influence the production of automobiles? How did it affect the price of the automobiles?
   5. Organize a group project for making some article or performing some service. Assign each member a specific job which he will do each time so that he becomes expert at that job alone. Get the opinion of your group as to the advantages and disadvantages of this operation and report to the class.
   6. Read about how the Industrial Revolution came about. Name some of the inventions that were responsible for changing our way of producing goods and explain.
   7. Invite an assembly line worker to speak to your class. Get a committee together to compose a letter giving him some idea of what you would like to know about his job. Be sure to have some questions prepared for his visit.
   8. Invite a craftsman to your class. (Could be shoemaker, artist, potter, etc.) Follow same procedure as in #7, above.)
   9. Play the game Share the Risk. See Roy, H. H. Spark, in Bibliography.
   10. Play game Assembly line. See Roy, H. H. Spark, in Bibliography.

C. Materials:
   1. Filmstrips:
      a. America's Earliest Craftsmen
      b. Evolution of American Inudstries, Enterprise and Welfare (Kit)

2. Resource persons:
    a. craftsman
    b. assembly line worker
3. Cassettes:
    a. Mr. Bell Invents the Telephone
    b. George Washington Carver

Unit Objective #9: The student will be able to speculate on the changes future technological advances may make in the way we live and work.

A. Criterion-Referenced Objectives:
    1. The student will be able to give two reasons and explain why man in the future may have to develop other ways to provide for his needs and wants.
    2. The student will be able to write a composition projecting himself into the future and speculating on the changes that might occur because of new technological advances.

B. Learning Activities:
    1. From your work done so far in the unit you have been able to observe how things have changed in the way we live today as compared to life in earlier times. Imagine some new discoveries which will make further changes in our food, clothing and housing. Use your imagination but make it sound reasonable. Read one of the books mentioned below or other material on the future to help you stretch your imagination.
    2. Collect cartoons showing what man might wear in the future. design some clothing yourself and tell why you think it might be suitable to life in the future.
    3. View a T.V. program such as Star Trek or UFO and describe the means of transportation used if space travel became a way of life in the future.
    4. Keep a file of clippings from the newspaper or magazine showing new developments which might affect our life. Make a bulletin board of these clippings with comments.
    5. Read about the lost city of Atlantis or one of Jacques Cousteau's experiments. Is is possible that man will be able to live under the sea in the future?
    6. As our natural resources become depleted or polluted, what sort of new advances must be made in the future so that man can live?
    7. Some authorities may say that the climate of the earth is changing and that we are approaching another ice age. What changes in our way of life would have to be made for us to survive?
    8. Arrange a field trip to the Solar House. Might this be the way we will heat the house of the future?
    9. Investigate one of the following and present to the class:
        Disposable clothing
        Fresh water from the sea
        Hydroponics-soilless agriculture
        Space travel
        Automobiles on tracks

Dick Tracy jet stream
Rocket belts
Travel on a cushion of air
Recycling of waste materials
Any other idea for the future you may consider practical or have heard about.

10. Read one of the following and share with the class:
    a. Christopher, J.; The Guardians; About a completely mechanized society.
    b. Erwin, B.K.; Summer Sleigh Ride; Children in the 24th century.
    c. Heinlein, R.A.; Farmer in the Sky; A world where soil and crops are non-existent.
    d. Peare, C.O.; Jules Verne; His life. Verne's stories forecast many of our modern inventions.
    e. Any other book relating to life in the future.

C. Materials:
   1. Field trip to Solar House in Newark.
   2. Filmstrips: Space (multi-media kit)

Unit Objective #10: The student will be able to explain how prices paid for goods and services are influenced by supply and demand.

A. Criterion-Referenced Objectives:
   1. The student will be able to explain the terms supply and demand.
   2. The student will be able to demonstrate the effect of supply and demand on prices by citing an example.

B. Learning Activities:
   1. If you wanted to trade something you have for money or for some other object, how would you decide on what your article is worth Think about the following situations and try to arrive at some answers to this question.

      Suppose you found a fairly rare coin such as an Indian Head penny. Would you sell it for one cent? How would you decide what it was worth? Why might it be worth more than its face value?

      You have a collection of baseball cards. A friend needs one of your duplicates very badly. How would you decide on what to ask him in return.

      After a snowstorm, all of the boys in the neighborhood want to earn money shoveling snow. The supply of snow shovelers is great but the demand for such a service is small. How might this affect the price people would be willing to pay for the service?

      One January, after a winter of very little snow, a storekeeper finds he has too many sleds on hand. What might he do to sell these sleds?

The tomato crop fails one year because of too much rain. Tomatoes are in very short supply. How might this affect the price you pay for them in the market?

2. Make up two examples of your own goods that are too abundant for the number of people wanting to buy them. Tell how this might affect the price.
3. Find examples (2) of a product that is very scarce but that many people are looking for. What will probably happen to the price? Suppose then the manufacturer floods the market with this product. What do you think would happen to the price?
4. Watch the newspapers for seasonal sales. Make a collection of articles offered and give possible reasons for their reduced prices.
5. Suppose you needed something very badly. How might this affect the price you would be willing to pay? Think of a situation to illustrate this. Share it with your group.
6. Two car washes advertise their services. However, one costs $1.25 while the other costs $2.75. What might account for the difference in prices?
7. Supermarkets often carry several brands of ice cream. Their own brand is offered for 69¢ per ½ gallon. However, in the freezer you notice three other brands with prices of 99¢, $1.49 and $1.79 per ½ gallon. How could you account for the difference in price? If you bought the most expensive, what would you expect of the ice cream?
8. An old handmade quilt is offered for sale at $85. A new machine made quilt costs about $10. Why might anyone prefer to buy the expensive one?
9. Invite a collector to speak to your class about his collection. Prepare a set of questions to ask him. One of the questions might be how he decides on what to pay for an addition to the collection.
10. If you are a collector of some item such as coins, stamps, miniature cars, etc. bring in your collection and tell the class how you go about adding to it. How do you decide what a new addition will be worth. Does bargaining enter into the action?
11. With a classmate, make up a little skit showing how you might bargain for something you want. He has something to sell and wants to get the best price for it. Present it to the class. Ask for comments as to how you might have made a better bargain.
12. Ask a store owner or a manager to speak on the subject of how supply and demand affects the prices he charges for his products. You might also ask him how he decides when the time is right to run a sale. How does he know how much and what to buy? Make a list of these questions before he comes.

C. Materials:
1. Old newspapers and magazines
2. Resource persons:
    a. Collector
    b. Store owner

D. Evaluation:

## PRE AND POST TEST

1. Name the three (3) basic human needs.

2. Name two objects that were used as money for the exchange of goods and services long ago and explain why they were used.

3. Before the use of money for exchange of goods and services, explain how the barter system was used. Give an example of how barter is sometimes still used today.

4. Explain with examples: "Wants are endless and cannot all be satisfied."

5. Which of the following are producers of foods and which are producers of services? Put "G" or "S" in the box to indicate GOODS or SERVICES.

   ☐ shoe repairman
   ☐ farmer
   ☐ coal miner
   ☐ clothing factory worker
   ☐ bookkeeper
   ☐ automobile assembly worker
   ☐ baker
   ☐ beauty parlor operator
   ☐ waitress
   ☐ artist

6. Discuss the interdependence of people today in the satisfaction of their needs and wants. Give three examples from your own observation.

7. Using some industry as an example, show how division of labor is used in the production of goods. What are its advantages over production of a product by a single operator?

8. Compare a product that is mass produced to one made by a craftsman as to quality and price.

9. Describe the home of a primitive people. What materials were used? What workers were involved in the construction. How do the number of workers compare with those involved in the construction of a house today?

10. Name 5 kinds of fibers used in making clothing today. Of these, which ones were used by our pioneer ancestors?

11. Using a piece of meat of a glass of milk as an example, describe the process the food went through before it arrived at your table.

12. If you were considering choosing a career to prepare for, what specific factors would be important for you to investigate?

# PEOPLE MANAGE THEIR RESOURCES TO SATISFY THEIR NEEDS AND WANTS

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Unit Title: SETTLING THE NEW WORLD (New Peoples Arrive)

I. Unit Overview: This unit examines the interaction on the shores of the New World of the major groups considered in the previous units--the Europeans, the West Africans, and the American Indians. The unit documents this interaction, as well as modes of European colonization and the motives influencing it, through an examination of various kinds of historical evidence relating to the colonization of the New World-- excerpts from journals, diaries, and newspapers of the day, public documents, and statistical information. Working individually and in groups with a foldout, data cards, data masters, and a data pack, students will gain experience in map reading and interpretation of statistical information. They will also add to their skill in using and evaluating evidence and will gain factual knowledge of the early colonial period of American history. This unit also provides a transition to the next unit which documents the conflict between the English colonists and the English government.

II. Unit Content Outline:
   A. The Mystery of Croatoan
   B. New Spain
   C. San Juan Capistrano Mission
   D. Slavery Comes to the New World
   E. The French Arrive
   F. The English
   G. The English meet the First Americans
   H. Slavery in the Charleston, South Carolina
   I. What was happening in the colonies?

III. Unit Objectives: At the end of this unit, students will be able to...
   1. to name the first three European groups to settle in the New World.
   2. give the reasons they came, primarily economic, political, and religious.
   3. Given evidence about the treatment of Indians and West African by different European groups, students will independently draw their own conclusions to the question, "Did the Europeans treat these groups fairly?"
   4. Plot a diagram showing the flow of goods and peoples involved in the "Triangular Trade."
   5. Compare slavery in each of the three different sections of the English colonies--the New England, Middle, and Southern Coloni
   6. Given evidence, infer about what life was like on Spanish mission.
   7. Working individually and in groups, generalize from data about the growth of colonies from the early settlements to the mid-eighteenth century.

IV. Unit Description:

Criterion-Referenced Objectives: At the end of this unit the student will be able to...
   1. Given a list of peoples, choose 3 that were among the first European groups to settle in the New World.

2. Given a list of reasons, identify reasons why each group came to America.
3. Name 5 European countries that settled in North America.
4. Identify the Indians and the Negroes as the 2 groups who worked as slaves in the fields and mines of America.
5. Describe the reactions of each group towards their slavery.
6. Given the above information, prove whether or not the Europeans treated the group fairly.
7. Name the 3 groups and 3 products which were involved in the Triangular Trade.
8. Plot a diagram showing the flow of goods and people involved in the Triangular Trade.
9. Name the 3 types of colonies and their regional locations.
10. Given a list of how the slaves were used, be able to check those appropriate to each of the 3 sections.
11. Identify the one condition of slavery that all slaves objected.
12. Name the 3 major purposes for which Spanish missions were built.
13. Given a list of types of people, as Spanish soldiers, Spanish priests, Indians, Spanish dancers, identify the groups that lived in a Spanish mission.
14. Name the 2 industries in which the inhabitants were employed.
15. Given a list of craftsmen select the 4 which were craftsmen in a Spanish mission.
16. Given a map of products of the English colonies, from 1660-1740, designate the area that grew the fastest.
17. Given the table on population and number of large cities, in Northeast Middle and Southern colonies, from 1660-1740, designate the area that grew the fastest.
18. Given data, identify 2 reasons why Northeastern cities grew faster than the others.

B. Learning Activities:
1. Examining evidence in the Holt Data Bank- drawing conclusions.
2. A field trip to Winterthur, to observe the colonial crafts.
3. A field trip to Odessa, DE to observe colonial life.
4. From small groups, each group selects one student to be a colonial craftsmen, and is interviewed by the entire class.
5. Examine product maps to determine occupations of certain regions.
6. Examine population maps to determine the reason for population growth.
7. Making murals showing occupations in a Spanish Mission, French Trading Post, New England Village, Southern Plantation.
8. Analyze and make maps, timelines, charts.
9. Role-playing.

C. Materials:
1. Text--Inquiring About American History
2. Records, maps, art paper, crayons, pencils, Holt Databank System.
3. Data foldouts--San Juan Capastrano Mission
4. Datamaster--the English Colonies
5. Data pack--slavery in the English colonies
6. Datacard--South Carolina Gazette
7. Data card--What was happening in the Colonies?
8. Texts--Living in the United States, Living in the Americas, Colonial America, Exploring with American Heroes, and Exploring Regions of the United States.

Unit Title: SETTING UP A BUSINESS

I. Unit Overview: This unit is intended for use after the unit entitled: People manage their resources to satisfy their needs and wants. It will investigate the economic factors involved in setting up and operating a business enterprise. Job opportunities and their requirements will be studied as they apply particularly to a small business, and will have practical application in the manufacturing and selling of a product produced in the classroom.

II. Unit Content Outline:
   A. Free Enterprise System
      1. Contrast with communist system
   B. Organization
      1. Individual Ownership
      2. Partnership
      3. Corporation
   C. Financing
      1. Issuing stock
      2. Borrowing
   D. Operation
      1. human resources
      2. raw materials
      3. capital resources
      4. costs and pricing
      5. keeping records
      6. using a bank
      7. advertising and selling
      8. effects of competition
      9. distributing profits

III. Unit Objectives: The student will be able to
   1. contrast the economic right of an individual in the United States with those in a communist country.
   2. examine and then distinguish between the various ways in which a business may be organized.
   3. Using some industry as an example, the student will identify the human, natural, and capital resources necessary to produce goods.
   4. Given an opportunity to set up a small business, the student will apply what he has learned about industry from the preceding study (#3 above) to demonstrate his understanding of the factors involved in the manufacture and distribution of a product.

IV. Unit Description:

Unit Objective #1: The student will be able to contrast the economic rights of an individual in the United States with those in a communist country.

   A. Criterion-Referenced Objectives: The student will...
      1. discuss the American free enterprise system as it applies to owners, managers and employees in a business enterprise.

2. The student will be able to discuss the role of the government in a communist economic system.

B. Learning Activities:
1. Read a discussion of the free enterprise system in an encyclopedia or in HOW THE AMERICAN ECONOMIC SYSTEM FUNCTIONS, pp. 14-17, or listen to tape made from these pages.
2. Read about the communist economic system in an encyclopedia choosing some communist country such as Russia or Cuba.
3. View filmstrips:
   a. Basic Ideas of Democratic Economics
   b. Economic Life in the Soviety Union
   c. Story of American Industry (more difficult)
4. Ask your parents to tell you about 3 economic decisions they were able to make in our society. How would these decisions be different if they had lived in a communist country?
5. Invite someone who owns his own business to talk to the class about how he started out. Be sure to tell him what you are interested in learning before he comes. Have a set of class questions ready to ask him when he arrives.
6. Make a chart contrasting these two types of economic systems. Your headings should include:
   a. Owner of the business
   b. Workers rights
   c. How managed
   d. Advantages
   e. Disadvantages

C. Materials:

Books:
1. Glassner, S.S. et al. HOW THE AMERICAN ECONOMIC SYSTEM FUNCTIONS
2. King, F.M. et al. USING THE SOCIAL STUDIES 4-5
3. Encyclopedias

Filmstrips:
1. Basic Ideas of Democratic Economics (McGraw-Hill)
2. Economic Life in the Soviety Union (McGraw-Hill)
3. Story of American Industry (Yale University Film Service)

Tapes:
Teacher-made cassettes from material above (for children with reading difficulties).

Unit Objective #2: The student will be able to examine and then distinguish between the various ways in which a business may be organized.

A. Criterion-Referenced Objective:
  1. The student will be able to state the meaning of individual ownership, partnership, and corporation and give two advantages and two disadvantages of each.

B. Learning Activities:
  1. Read or listen to tapes made from two of the following:
    a. How The American Economic System Functions, pp. 28-35.
    b. Economics-The Dismal Science, pp. 28-35.
    c. Industry: Man and the Machine, pp. 179-184.
    d. Article on business in an encyclopedia
  2. View filmstrip story of American Industry
  3. Identify parents who are individual owners, partners, or members of a corporation, or who are employees of such organizations. Invite them to speak to the class or interview them as to:
    a. How the business started
    b. Who owns it
    c. Who gains or loses from the business
    d. What are the advantages and disadvantages of owning or working in this business.
  4. From your study, make a chart showing the differences in the three types of business organization. Your headings should include:
    a. Number of people needed to begin
    b. Who owns the business
    c. Who operates the business
    d. Who gains or loses from the business

C. Materials:
  Books:
  1. Ellenberg, N.L.; Economics-The Dismal Science
  2. Glassner, S.S. et al; How the American Economic System Functions, pp. 28-35.
  3. Industry: Man and the Machine, pp. 179-186

  Filmstrips:
  1. Story of American Industry (Yale University Film Serivce)

Unit Objective #3: Using some industry as an example, the student will identify the human, material, and capital resources necessary to produce goods.

A. Criterion-Referenced Objectives: The student will...
  1. be able to determine what human resources are necessary for making the product.
  2. be able to identify the raw and other materials necessary for making the product.
  3. identify the capital resources necessary for making the product.
  4. illustrate with examples from his study how division of labor and specialization increases interdependence of workers.

B. Learning Activities: Work in this unit will be in form of a research project with students working in small groups of 3 or 4. Work will include:

1. Choosing an industry and researching it in books, encyclopedias, magazines, etc.
2. Checking current newspapers and magazines for clips relating to the industry.
3. Producing a joint written report on the industry including the following:
    a. How and why the industry started (inventions, discoveries, etc.)
    b. Natural resources used in production (where they come from, how used)
    c. Workers involved
    d. Production (machinery, division of labor, assembly line, etc.)
    e. Illustrations from magazines, newspapers, company brochures, etc. of the products made.
    f. Clips from magazines, newspapers, etc. relating to the industry.
    g. Future developments in the industry.
4. Make a flow chart in poster form to demonstrate the steps in the manufacture of the product.
5. Collecting actual materials (as far as possible) to use in demonstration to class.
6. Reporting as a group to the class. Suggested industries:

Textile
Chemical
Shoe
Clothing
Paper
Petroleum
Bread
Glass
Meat Packing
Sugar

C. Materials:

1. Encyclopedias
2. Suggested references under articles in encyclopedias
3. Selected filmstrips (see card catalog)
4. Social Sciences: Concepts and Values, 4, pp. 171-178.

Unit Objective #4: Given an opportunity to set up a small business, the student will apply what he has learned about industry to demonstrate his understanding of the factors involved in the manufacture and distribution of a product. (This will be a hands-on class project. The product, as envisioned here, would be the production of two types of cookies which could be made in the school and sold to students, staff, and parents. The project is proposed for approximately eight weeks. At that time the class may decide whether to continue or end the project.)

A. Criterion-Referenced Objective:

1. The students will be able to estimate the market for his project.

B. Learning Activities:
1. Devise a questionnaire to go home to parents, and circulate to staff, asking for acceptance or rejection of product, offering choices of product, and asking for possible orders to be taken each week.
2. Collate information from questionnaire and graph results.
3. Decision-making--class will vote on project.
4. Choose a name for the business and some catchy name for the product. You might review the names of similar products on the supermarket shelf and bring suggestions in to class. Class will vote on names.
5. How many similar products are there on the market? What would make yours more desirable?

Unit Objective #4: Given an opportunity to set up a small business, the student will apply what he has learned about industry from the preceeding study (#3) to demonstrate his understanding of the factors involved in the manufacture and distribution of a product.

A. Criterion-Referenced Objective:
2. The students will be able to devise a plan for the organization of the business and production of the product, including the workers involved.

B. Learning Activities:
1. Using what you have learned about the organization of a business in Unit Objective #2, decide on the type of business organization that would suit the project, including the workers involved.
2. Make a list of the people needed to manage your business. Read an article in an encyclopedia or appropriate book on business organization to help you. Keep your organization as simple as possible. Parents may help on this. What qualities would you look for in selecting your management team?
3. In class discussion, arrive at a list of the kinds of jobs required for the production of your product. Make a flow sheet spelling out the jobs involved in each step of production. This will be displayed and used for organization of your assembly line.
4. Invite the nurse to talk to your class about health regulations necessary for working with a food product. Make a set of rules for the workers who will be handling the food.
5. Read a book about baking such as At The Bakery and I Want to be a Baker.

C. Materials:
1. Books:
    a. Greene, C.; I Want to be a Baker.
    b. Yellow Pages of Learning Resources, pp. 11-12.

Unit Objective #4: Given an opportunity to set up a small business, the student will apply what he has learned about industry from the preceeding study to demonstrate his understanding of the factors involved in the manufacture and distribution of a product.

A. Criterion-Referenced Objective:
  3. The students will be able to estimate the cost of materials, capital expenditures, and wages for workers.

B. Learning Activities:
  1. Using the results of the questionnaire, a group will investigate recipes to be used in making the product. Decide on a recipe and how many units the basic recipe will make. How many can you expect to sell? What multiple of the recipe is necessary to make a week's supply?
  2. A group will investigate cost of ingredients at two different supermarket to determine best prices. Then make a chart to show quantities and prices as below, "X" being the multiple of the basic recipe:

|  | INGREDIENTS, AMOUNTS, AND PRICES |  |  |  |
|---|---|---|---|---|
| Ingredients | Basic Recipe | Basic Price | "X" Basic Recipe | "X" Basic Price |
|  |  |  |  |  |

  3. From the table on the previous page, a group will prepare an order list with prices and sum of total expenditure.
  4. Capital expenditures for materials such as bowls, cookie sheets, etc. will be determined by another group. Make a list of all equipment necessary for the project. Some may be borrowed. Those which cannot will be purchased. Make a list of these and investigate prices.
  5. A group will investigate packaging materials and advertising materials and note prices and quantities needed.
  6. Wages for your workers should be determined. Something very small but desirable could serve as payment, such as a piece of bubble gum or a sour ball. Should all workers receive the same payment? If not, what should determine the difference? When you have decided how much to pay each worker, arrive at a cost for a week's work for each worker.
  7. Using all of the above data, a committee will calculate the cost of operation for 4 weeks. The committee will make a list of the materials needed and their cost, and present it to the class as the resources necessary to start production.

Unit Objective #4: Given an opportunity to set up a small business, the student will apply what he has learned about industry from the preceeding study to demonstrate his understanding of the factors involved in the manufacture and distribution of a product.

A. Criterion-Referenced Objective:
  4. The students will be able to set up a plan for financing the project.

B. Learning Activities:

1. Using the data collected in CRO #3, and recalling what you know about corporations, how would you go about financing this project?
2. You will probably decide on issuing stock in the company. Decide on how much a share will sell for. How many shares will have to be sold in order to get enough money to start production?
3. Read HOW THE AMERICAN ECONOMIC SYSTEM FUNCTIONS, pp. 34-36 and INDUSTRY: MAN AND THE MACHINE, pp. 181-190, for an explanation of how stock helps finance a business.
4. Set up a group of students to write an interest-getting speech to encourage students, staff, and parents to participate in the stock purchasing plan. Give your speech to other classes and at a PTA meeting, or on the school T.V.
5. Look at a real stock certificate and have a group design one for your corporation. Issue one to each investor. Be sure to enter his or her name in the record book together with the number of shares purchased.
6. Choose a stock from those listed in the stock report section of the newspaper. If your parents own stock they may be able to suggest one. Your teacher will help you read and understand the report. Keep a record of your stock for two weeks. make a line graph using 1/8 intervals to show the rise or fall of your stock. Estimate how much money you have lost or gained in the two weeks.
7. Write a letter to the company whose stock you chose asking them to send you their annual report to shareholders. Be sure to tell them what you are doing and why you want the report.
8. Suppose the stock you issued was not sufficient to finance the business. What other means would the company have? Find out about borrowing from a bank--making a loan. In this project we will not borrow from a bank as our business is too small but we might have to borrow from parents and friends to finance our business. People who lend money expect to be repaid with interest. Find out what your bank charges as interest on loans. What would the interest be on a loan of $40? $150? What are the advantages and disadvantages of borrowing money? Investigate this in an encyclopedia or appropriate book.

C. Materials:

1. Stock Exchange Section of a local newspaper
2. Books:
    a. Glassner, S.S. et al. How the American Economic System Functions.
    b. Industry: Man and the Machine.
    c. Ellenberg, N.L.; Economics--The Dismal Science
    d. Yellow Pages of Learning Resources

Unit Objective #4: Given an opportunity to set up a small business, the student will apply what he has learned about industry from the preceeding study to demonstrate his understanding of the factors involved in the manufacture and distribution of a product.

A. Criterion-Referenced Objective:
   5. The students will be able to set up and keep a simple record of income and expenditures and arrive at a balance.

B. Learning Activities:
   1. You will want to keep a record of where your money comes from and how it is spent. Whose job will it be to do this? What equipment and helpers might be needed. Here are some things you need to record:
      a. The shares of stock you sold, to whom, and the amount paid.
      b. The amount you spent to set up the business.
      c. The amount spent for supplies.
      d. The amount spent for wages.
      e. The amount received for goods sold.

      You will keep a running balance of your money so that at any time you will know exactly how much money is available.
   2. To be sure that your money is safe, you probably will want to open a savings account in a bank. You will need it to be available to purchase additional supplies. Discuss this with the manager of the bank. Ask him to spend someone to explain to the class how your money may earn interest, and where the bank gets the money to pay interest on its savings account.
   3. Each month you might issue a statement to your shareholders listing your income, expenditures and balance on hand. You might also like to inform them of other aspects of the business such as how many cookies were sold each week and to whom (parents, students, staff). A good way to do this might be to put the data in the form of a graph. You might also include a graph contrasting total sales for each of the four weeks.
   4. Read about banks and saving money in one of the following:
      a. Davis, M.; Careers in a Bank.
      b. Ellenberg, N.L.; Economics--The Dismal Science.
      c. Presno, V.; People and Their Actions in Social Roles, pp. 46-47.
      d. Shay, A.; What Happens When You Put Money in the Bank.
      e. Williams, B.; I Know a Bank Teller.
      f. Yellow Pages of Learning Resources, p.4.
   5. View one or both of the following fimlstrips:
      a. My Mother Works in a Bank
      b. I Want to be a Bank Teller

C. Materials:
   1. Books and filmstrips as noted above
   2. Encyclopedias

Unit Objective #4: Given an opportunity to set up a small business, the student will apply what he has learned about industry from the proceeding study to demonstrate his understanding of the factors involved in the manufacture and distribution of a product.

A. Criterion-Referenced Objective:

6. The students will be able to plan an advertising and selling campaign.

B. Learning Activities:

1. In order to sell your product, you will have to let people know about it. You will need someone to organize your advertising. What qualifications would this person need? Read about a career in advertising in an encyclopedia or a book such as "Looking Forward to a Career: Advertising."
2. Cut out advertising copy from magazines or newspapers which you think make people buy the product. Try to arrive at the reasons the ads are successful. Do you believe exactly what the ad says about the product? How do you choose between two similar products that are advertised?
3. List the advantages of your product. Are there any disadvantages? If there were would you mention these in your ads? Why or why not? The government is now looking into false claims made by producers of goods. Find out about this "truth in advertising" campaign. Check the daily papers for news of the crack-down on misleading advertising.
4. Design a trademark for your product. Ask your art teacher to help make a lino block or some other means for printing the design. Plan to use this in your advertising and on the packaging of your product. You will want to make a collection of commercial trademarks before you decide to see just what makes an attractive and distinctive trademark. Submit several designs to the class and ask for a vote.
5. Write a skit for T.V. advertising the product. What jobs are involved in this? You will need the cooperation of the T.V. staff also. Observe several T.V. commercials to help you decide on the best way to convince people to buy your product.
6. Make posters to place around the school advertising your product. How do you choose people to make the posters? What are the important points to know about making posters? Your art teacher will be able to help you there.
7. Now that you have advertised your product, you will need salesmen. Choose a sales manager who will assign the salesmen and will handle the money they bring in. What kind of a person would make a good salesman?
8. Each salesman might keep an account of each day's sales. Note sales made to students, parents, and staff. Assist the accounting staff in making graphs of your sales data for report to shareholders.
9. Which salesmen are super? Each salesman will keep a record of his own sales and the team will graph sales for all the salesmen. Should your best salesmen get a bonus? How much and on what basis. What is the purpose of giving bonuses?

C. Materials:
  1. Art materials for printing
  2. Poster board
  3. Graphing supplies
  4. Newspapers and magazines
  5. Book:
    a. Larranga. B.; Looking Forward to a Career: Advertising

Unit Objective #4: Given an opportunity to set up a small business, the student will apply what he has learned about industry from the preceeding study to demonstrate his understanding of the factors involved in the manufacture and distribution of a product.

A. Criterion-Referenced Objective:
  7. The students will be able to devise a plan for calculating profit or loss to the shareholders.

B. Learning Activities:
  1. Since the object of investing in a business is for the purpose of making money, the shareholders will expect to know how the business stands when the project ends. They will have to know whether their investment has earned a profit, and how much or whether it has lost money, and how much. After two months of operation you decide to end the project. In order to decide how much money each shareholder should get, you will have to...
    a. determine the amount of money in the bank including interest.
    b. know the value of the capital goods on hand.
    c. turn the value of goods, materials and equipment into money.
    d. arrive at the sum total of the real worth of the company.
  2. How can you turn the value of materials, stock on hand, and capital goods into money? Here are some possibilities but you may think of others:
    a. Hold an auction.
    b. Hold a sale of stock on hand.
    c. Ask parents and staff to buy.
  3. Suppose you issued 100 shares of stock at $1.00 a share when the company started. What was the total investment in the company? After doing all of the above, you now find that the company has assets of $142.00. What is each share worth now? How much has each shareholder lost or gained from his investment?

## EVALUATION

This unit will be evaluated on the individual reports made by each student on the industry he selected for study, as well as by his performance in the class manufacturing project.

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## Unit Title: THE INTERDISCIPLINARY APPROACH TO MASS-PRODUCTION

I. Unit Overview: Since industry has come to depend upon mass-production as the only effective means of supplying the consumer with his great demand for goods, children should be aware of the procedures, development and employees necessary for the success of assembly line production. Further, children, who are themselves consumers, must be able to differentiate between products of varying degrees of quality and workmanship. They should learn to appreciate the complexity involved in the manufacturing industry and the influence it has on their own lives.

This unit is designed on the fifth grade level and will be taught to approximately thirty students. The unit should cover a four to six week time period.

II. Unit Content Outline:
- A. Mass-Production vs. Piece Work
  - 1. Mass production
  - 2. Piece work
  - 3. Comparison and Contrast
- B. Mass-Production in the U.S.
  - 1. Largest companies
  - 2. Successful vs. Unsuccessful
  - 3. Raw Materials

III. Unit Objectives: The student will be able to ...
1. describe the differences between assembly line, mass-production and piece work in paragraph form.
2. write a letter to a manufacturer asking for information about this product.
3. list the largest mass-producing companies in the U.S.
4. identify the raw materials needed for the production of a product.
5. construct a product both piece work and on an assembly line and compare the time needed and quality of the product.
6. write a report describing the introduction of mass-production into the U.S.
7. list career opportunities available in manufacturing and mass-production.

IV. Unit Objective #1: The students will be able to describe the difference between assembly line mass-production and piece work in paragraph form.

A. Criterion-Referenced Objectives: The student will be able...
1. to describe in writing at least five differences between mass-production and piece work.
2. to write an imaginary interview with an assembly line employee.
3. write an imaginary interview with an assembly line manager.
4. develop an imaginary product and draw a series of pictures showing it being produced on an assembly line.
5. write a letter to a piece worker inquiring about his product and method of production.
6. Given a set of materials on mass-production and piece work, the student will write a research project comparing the need for mass-production to the need for piece work.

B. Learning Activities:
1. a. Discuss mass-production and piece work.
   b. Collect pictures of assembly line mass-production and piece workers to display on a bulletin board.
   c. Go in small groups to the library to do research on mass-production and piece work.
   d. Display materials on mass-production and piece work.
2. a. Visit an assembly line.
   b. Take pictures of workers on an assembly line.
   c. Tape interviews with workers and managers on an assembly line.
   d. Display pictures from 2b and label what each person is doing.
3. a. Develop a game using information learned on mass-production.
   b. Play game in 3a.
4. a. Make a survey of community members who work in manufacturing.
   b. Make a survey or workers in the community do piece work.
5. a. Do pantomimes of workers in piece work and assembly line workers.
   b. Have the children guess the roles.

C. Materials:
1. Newspapers and magazines
2. Camera and film
3. Tape recorder
4. Chart paper
5. Materials on mass-production and piece work

Unit Objective #2: The students will be able to write a letter to a manufacturing tuter asking for information about his product.

A. Criterion-Referenced Objectives:
1. The student will be able to list the information he would like to have from a company.
2. The student will be able to list at least five mass-producing companies in the area available to contact.
3. The student will be able to list and describe products made by five different companies in the area.
4. The student will be able to construct a miniature of a product made by one of the five companies listed above.
5. The student will be able to write a sample business letter to an imaginary company asking for information on the specific product, working conditions, number of employees, etc.
6. Given a list of ten companies and their addresses, the student will be able to write a business letter to one of the companies.

7. The student will be able to dress up as an imaginary product and orally describe how it is produced.
8. The student will be able to recite an oral presentation on a specific company of his choice using diagrams and charts to help describe its method of production.

B. Learning Activities:
1. Read text pages 294-295 and p. 296.
2. Do exercises together on pages 294-296.
3. Make a class scrapbook on manufacturing.
4. Display miniature products from #4 and create a "State Fair" on manufacturing.
5. Make a bulletin board display of materials received from letters in #6.

C. Materials:
1. Engligh 5, Shane, York Hester, Street and Locke, The Laidlaw English Program.
2. The children will have to determine materials necessary to dress up as a product.
3. The children will have to determine materials necessary for making miniature products.
4. Materials on mass-production.

Unit Objective #3: The students will be able to identify the largest mass-producing companies in the United States.

A. Criterion-Referenced Objectives:
1. Given an up-to-date Almanac, the student will be able to list the ten largest mass-producing companies in the U.S. in order of largest to smallest.
2. Given an Almanac and graph paper, the student will be able to record the ten largest mass-producing companies on a graph comparing their gross earnings of the past ten years.
3. The student will be able to list ten positive attributes and ten negative attributes of mass-producing companies.
4. Given the above list, the student will be able to write a paragraph describing why some companies are more successful then others.
5. Given resource materials, the student will be able to write a report describing one of the ten companies from #1 including the type of product made, its yearly gross earnings, and its physical as well as intangible attributes leading to its success.
6. Using the above information, the student will be able to construct in writing a model company.

B. Learning Activities:
1. Discuss why some companies fail and others companies succeed.
2. Discuss how to use an Almanac.
3. Make a "Monopoly" game to show how companies succeed of fail.

C. Materials:
1. Up-to-date Almanac
2. Chart paper
3. Graph paper

Unit Objective #4: The students will be able to identify the raw materials needed for the production of a product.

A. Criterion-Referenced Objectives:
   1. Given a dictionary, the student will be able to write a definition of raw material.
   2. Given a list of ten mass-producing companies, the student will be able to choose one company and list the raw materials needed for the production of its product.
   3. Given the above list #2, the student will be able to develop a chart displaying the raw materials and how they are used to make the finished product.
   4. Given a list of 15 scrambled raw materials and a list of five (5) companies, the student will be able to list the correct raw materials under the proper company.

B. Learning Activities:
   1. Discuss the definition of raw material.
   2. Collect pictures of raw materials.
   3. Have the children pretend they are a raw material and the other children guess what raw material he is.
   4. Play a game where given a specific product, the children, two at a time, run to the board and list as quickly as possible all of the raw materials.

C. Materials:
   1. dictionary
   2. magazines
   3. chart paper
   4. chalk board

Unit Objective #5: The students will be able to construct a product by piece work and on an assembly line.

A. Criterion-Referenced Objectives:
   1. The student will be able to select from a list of ten possible products the product he wishes to make and list all of the materials needed for making that particular product.
   2. The student will be able to construct a circular chart displaying the finished product in the center and arrange the materials needed around it.
   3. Given a set of materials, the student will be able to produce a completed product done by piece work.
   4. Given a set of materials, a group of not more than six children, the student will be able to help produce the same product in three on an assembly line.
   5. Given graph paper, the student will be able to accurately graph the time needed to complete his particular product done by piece work compared to the time needed on an assembly line.
   6. The student will be able to compare and contrast in writing quality of the product made by piece work to the one made on an assembly line.

7. Given a set of objects displayed on a table, the student will be able to list the articles according to quality from best to the least well-made.
8. Given the information from above, the student will be able to write a report stating conclusions made from his investigation of products.

B. Learning Activities:

1. Develop a classroom graph showing the times for making all of the products made by piece work and on an assembly line.
2. Discuss what qualities make products better than others.
3. Invite a visitor from a company that produces products on an assembly line.
4. Invite a visitor who makes his own products.
5. Compile information from #3 and #4 and display it on a chart.
6. Take a piece of construction paper and cut out designs (puzzle fashion) and have another child try to put it back together.

C. Materials:

1. construction paper
2. chart paper
3. materials for making the various products will be determined by the students.
4. Various types of products to be displayed.
5. Visitor from mass-producing company.
6. Visitor who does work by piece work.

Unit Objective #6: The student will be able to write a report describing the introduction of mass-production into the United States.

A. Criterion-Referenced Objectives:

1. Given research materials, the student will be able to outline the history of mass-production in the United States.
2. Given a skeleton outline and a list of information, the student will be able to accurately place the information into the outline.
3. Given an outline containing five (5) mistakes, the student will be able to recognize the errors and explain orally why they are errors.
4. Given a story, the child will be able to outline the contents.
5. Given an outline on specific topic, the student will be able to write an original story incorporating all of the information found in the outline.
6. Given a list of 25 topics, the child will be able to identify the encyclopedia volume in which the topic would be found.
7. Given a list of ten questions, the student will be able to identify the key word or words needed to know where to find the information requested.

8. Given the names of four reference books, an Almanac, a set of encyclopedias, dictionary, and a telephone book, and a list of 25 questions, the student will be able to identify the type of reference book in which the answer can be located.
9. The student will be able to write a report not less than two pages in length on the introduction of mass-production into the U.S.

B. Learning Activities:
- 1-5.
  - a. Discuss what an outline is and its function.
  - b. Make a sample outline on the board.
- 6.
  - a. Discuss what types of information can be found in an encyclopedia and how it is arranged.
  - b. Using the opaque projector, show a factual encyclopedia.
  - c. Do worksheet #1.
  - d. Play an encyclopedia game. The teacher calls out a topic and the child first to raise his hand and give the correct value gets a point for his team.
- 8.
  - a. Display different types of reference materials.
  - b. Discuss the differences in the materials and types of information found in each.
  - c. Make a chart divided into four sections and list the types of information found in four different reference materials.
  - d. Do worksheets #3 and #4.
- 9.
  - a. Discuss the procedure for writing a report.
  - b. Make a chart showing the sequence of writing a report.
  - c. Discuss what reference materials could be used.
  - d. Collect materials from library, home, classroom, etc.

C. Materials:
1. Various outlines and materials as explained in CRO's.
2. Set of encyclopedias
3. Opaque projector
4. Worksheets #1 - #4.
5. Almanac
6. Chart paper
7. Reference Materials (as listed in CRO's)

Unit Objective #7: The students will be able to list career opportunities available in manufacturing and mass-production.

A. Criterion-Referenced Objectives: The student will be able to...
1. list five (5) occupations available in at least two different companies dealing in mass-production.
2. Given a specific company, the children will be able to write an acceptable business letter to a company asking for information on jobs available. Acceptability will be determined by the instructor.
3. Given a list of five (5) different companies dealing in five (5) separate types of mass-production, and a list of twenty-five occupations, the children will be able to match the occupations with the appropriate company.
4. Given a newspaper, the children will be able to identify the "Want Ad" section.

5. Using the "Want Ads" in the newspaper as examples, the students will be able to write their own "Want Ads."
6. Given a list of newspapers and their addresses around the United States, the student will be able to choose a particular newspaper and write an acceptable business letter asking for a copy of their specific newspaper.

B. Learning Activities:
   1. Discuss what types of employees are needed in a company producing cars, furniture, clothing, etc.
   2. Discuss the skills the workers need.
   3. Set up a mock company and delegate jobs to each student.
   4. Divide the children into groups of two and create interviews one being the reporter and the other the worker.
   5. Make a bulletin board displaying "Want Ads" in #5.
   6. Make a newspaper showing jobs available in mass-production across the United States.

C. Materials:
   1. A list of five (5) companies and at least twenty-five occupations found in those companies.
   2. Newspapers.
   3. List of newspapers and their addresses around the country.

## EVALUATION

DIRECTIONS: Answer each statement in complete sentences.

1. Describe an assembly line. Include how it works, the necessary employees, and its use to society.

2. Describe production done by piece work. Include how it works, the necessary employees, and its use to society.

3. Compare the quality versus the quantity of mass-production to piece work.

4. Write a sample business letter to a manufacturer requesting information about the company.

5. Write a paragraph explaining the qualities necessary for a successful company.

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## LOOK-IT-UP WORKSHEET

I. In which volume of our set of encyclopedias would you look to find each of these topics? Write the letter or letters of the volume on the line.

______ 1. Sun

______ 2. Davy Crockett

______ 3. Bacteria

______ 4. Mountain

______ 5. France

______ 6. Communication

______ 7. Ear

______ 8. Money

______ 9. Halloween

______10. Automobile

______11. John McKinley

______12. Baby Elephants

Worksheet II

IV. In each of the questions below, first underline the key word or words. Then look up the answers to each question.

1. What is the capital of Brazil? ______________________________

2. When did Arizona become a state? ______________________________

3. Where was John Kennedy born? ______________________________

4. What color is a mocking bird? ______________________________

5. What is the state tree of Oklahoma? ______________________________

6. How many starts are there in the constellation, Taurus? _______

7. Who was president of the United States in 1920? ______________

8. What was the name of the tune Francis Scott Key used for the Star Spangled Banner? ______________________________

9. What is the largest horse? ______________________________

10. What birds can "talk?" ______________________________

Worksheet III

III. Answer the follwoing questions by writing "D" (dictionary), "T" (telephone), or "E" (encyclopedia) on the line.

In which reference book would you look to find ...

____ 1. pictures of horses

____ 2. who was Johann Printz

____ 3. what does ambidextrous mean

____ 4. where you can have your bicycle repaired

____ 5. how to pronounce parliment

____ 6. the doctor's address

____ 7. the kinds of homes in which the Eskimos live

____ 8. why volcanoes erupt

____ 9. a synonym for lazy

____10. the capital of Tibet

Worksheet IV

II. Answer the following questions by writing "before" or "after" in the blank space.

__________ 1. If you were looking in the encyclopedia for the article on Mexico would you find it before or after the guide word Man?

__________ 2. If you were looking for the article on July, would you find it before or after the guide word June?

__________ 3. If you were looking for the article on Christmas, would you find it before or after the guide word Canada?

__________ 4. If you were looking for the article on Daisy, would you find it before or after the guide word Delaware?

__________ 5. If you were looking for the article on Flowers, would you find it before or after the guide word France?

Unit Title: TRANSPORTATION

I. Unit Overview: This unit will examine early and modern systems of transportation and how they have affected our history. It will emphasize the important role that transportation plays in helping man to acquire his basic needs. Throughout the unit, man's role will be stressed, not only through jobs which are created by the systems but also through the interaction and cooperation necessary for transportation.

II. Unit Content Outline:

A. Definition-The movement of goods and people from one place to another.
B. Necessity for transportation
C. Kinds of transportation
    1. Early
        a. walking
        b. travois
        c. animals
        d. boat
        e. wheel
        f. single-axle vehicles
        g. double-axle vehicles
    2. Modern
        a. Land
            1. railroads
            2. trucks
            3. cars
            4. wagons
            5. bicycles
            6. subways
            7. buses
        b. Sea
            1. boats
            2. barges
            3. rafts
        c. Air
            1. airplane
            2. rocket ship
D. Effect on history
    1. Role in westward movement
        a. railroad
        b. stage coach
        c. covered wagon
        d. roads
    2. Role in exploration
        a. iron ships
        b. canoes
        c. clipper ships

3. Role in Space Discovery

E. People of Interest
   1. Robert Fulton
   2. Dewitt Clinton
   3. Orville and Wilbur Wright
   4. James Watt
   5. Henry Ford

III. Unit Objectives:

1. The student will be able to discuss orally the necessity of transportation in supplying our basic needs.
2. The student will be able to compare and contrast early and modern transportation systems.
3. The student will be able to identify people whose jobs play an important role in transportation.
4. The student will be able to identify some of the effects transportation has had on the growth of the United States.

IV. Unit Description:

Unit Objective #1: The student will be able to discuss orally the necessity of transportation in supplying our basic needs.

A. Criterion-Referenced Objective: The student will be able to write a paragraph stating at least three reasons why transportation is necessary in supplying our basic needs.

B. Learning Activities:
   1. Research to find out things brought into our community from elsewhere. Pictures of goods to make a large display map. Goods shipped out of our community could be another map.
   2. Let the students pretend that suddenly, the nation was deprived one or more of the following: buses, trucks, trains, or airplanes. Let them imagine what life would be like and record their thoughts in paragraphs, poetry, art work etc.
   3. Have students plan a debate on whether the government should ban the importation of:
      a) Foreign cars
      b) Japanese or German cameras
      c) foreign bicycles
      d) other examples

   Then have them discuss what would happen if Venezuela or Arab countries stopped shipping oil.

C. Materials:
   Filmstrips: Producing the World's Food 405215
   Producing the World's Goods 405217
   McGraw Hill Book Co.

Unit Objective #2: The student will be able to compare and contrast early and modern transportation systems.

A. Criterion-Referenced Objectives: The student will...

1. be able to work with others in creating a mural or booklet depicting the transition from early to modern transportation systems.
2. be able to collect and classify pictures of early and modern transportation systems.
3. construct one model of an early or modern method of transportation.

B. Learning Activities:

1. Have a panel discussion on various types of transportation the students have used and which are best suited for different kinds of trips. List at least 10 people who could help you or who you may depend upon during your trip. Then have each student select a country. Using maps, brochures from travel agencies, newspapers, etc., have students take a 2 week trip including:
    a. what to take with them
    b. where to travel
    c. what cities to visit
    d. what types of transportation to use to get to destination and while there.
    e. what amusements to pursue.
2. Have students plan and execute a mural(drawing or collage) showing changes from early to modern transportation systems. The students might also do individual booklets.
3. Have students collect pictures of transportation in magazines and newspapers. They can make charts or booklets classifying these into early and modern.
4. Let students construct models or dioramas of various forms of transportation, i.e.:
    a. covered wagons
    b. single-axle carts
    c. paddle wheel carts
    d. steam boats
    e. steam engines
    f. dugout canoe
    g. gliders

    Students are to explain orally how their method influenced the growth of the U.S. and what the U.S. would have been like without their method of transportation. The students could work in groups under large headings:

| EARLY | MODERN |
|---|---|
| land | land |
| sea | sea |
| air | air |

5. Reports including models if possible on "roads in our history" from dirt to modern days. The report should include a map showing our interstate highway system. This should also include a map showing early trails west (Erie Canal, National Road, Santa Fe Trail, etc.).

6. Color pictures of three forms of transportation (attached) and write one paragraph on each.
7. Locate on a map trails used by pioneers (sample attached).
8. Wall Frieze or Diorama: Examples of possible lists-students to put methods in order when drawing on charts.
   a. Land (early)
      1. walking, travois, animals, single-axle, double-axle.
   b. Land (modern)
      1. railroads, bicycles, cars, trucks, buses, and subways.
   c. Sea (early)
      1. raft, canoe, barge, clipper ship, iron ship, paddle wheel boats, canal boat, steamboat.
   d. Sea (modern)
      1. oceanliner, submarine
   e. Air
      1. Research different planes. Draw pictures of their progression.

C. Materials:
1. Study Prints: "Early American Transportation" - Walt Disney 16mm Films set #200 (8 prints).
2. Films: Society for Visual Education, Inc.
   1. "How People Travel in the City" sp 129.
   2. "Moving Goods for People in the City"
3. Filmstrips: McGraw-Hill Book Company

| | | |
|---|---|---|
| 1. | Floating and Moving on Water | 273002 |
| 2. | Flying with Jets and Rockets | 273006 |
| 3. | Controlling Airplanes | 273004 |

4. Transparencies: Transportation map of the United States - overlays; Nystrom, Chicago.

Unit Objective #3: The student will be able to identify people whose jobs play an important role in transportation.

A. Criterion-Referenced Objectives: The student will be able to...
1. work with others in preparing and presenting a skit relating to a form of tranpsortation. At least two jobs should be portrayed in each skit.
2. report on the contributions of one of the people who played an important role in the development of transportation.

B. Learning Activities:
1. Booklet- "Who's Who in Transportation" could include early and modern people who contributed to transportation.
2. Have students choose one area such as:
   airport
   bus station
   train
   freighter
   ocean liner
   trucking

   After they research a topic, they can prepare a skit (perhaps involving all class members) to demonstrate their knowledge about that transportation system. For example:

   Mock airplane flight
   airplane control tower
   airport: Gift shop
   Restaurant

   passengers
   pilot
   co-pilot
   mechanics
   radio operators
   stewardesses

C. Materials:
  1. Filmstrips:
    a. Robert Fulton EFL 10
    b. Wright Brothers EFL 17; Enrichment Landmark Filmstrips
    c. Henry Ford, The Man Who Put America on Wheels 65-G; Eye Gate.
    d. Transportation and Transportation Workers 100-H; Eye Gate, (Workers for the Public Welfare).

Unit Objective #4: The student will be able to identify some of the effects transportation has had on the growth of the United States.

A. Criterion-Referenced Objectives: The student will be able to...
  1. examine in-depth and report on how either land, air or sea transportation has affected the growth of our country.
  2. suggest at least two ways that transportation might be changed in the future.

B. Learning Activities:
  1. After discussing the criteria for oral reporting, divide students in groups and let them choose various topics under Land, Sea or Air transportation. After research, groups should present an oral report (including visual aids) on how that form of transportation influences our country. Or else they can complete murals.
  2. Give students a diagram of a "city of the future." This will only show streets. Have them plan the transportation system for that city (perhaps also the communication system). Students should draw pictures of the methods of transportation that might be used and explain how it will work.
  3. Draw state of Delaware (or supply each child with an outline map). Have children put in airports, train stations, buses, taxi stands subways, etc.
  4. Design a transportation system of the future. Explain how it will be used and the workers who will be necessary.

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5. Langdon, William C.; Everyday Things in American Life; Scribner; 1951
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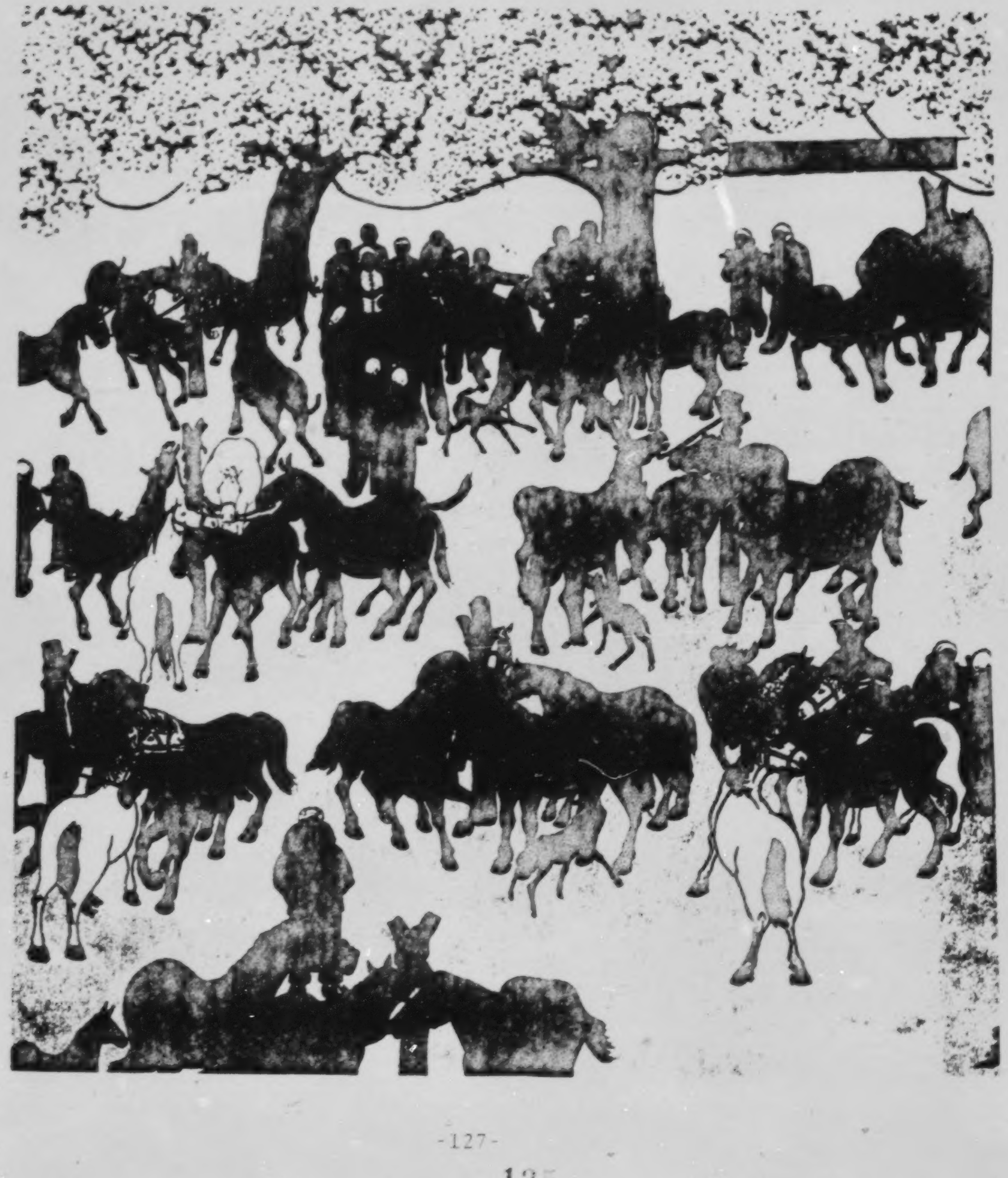
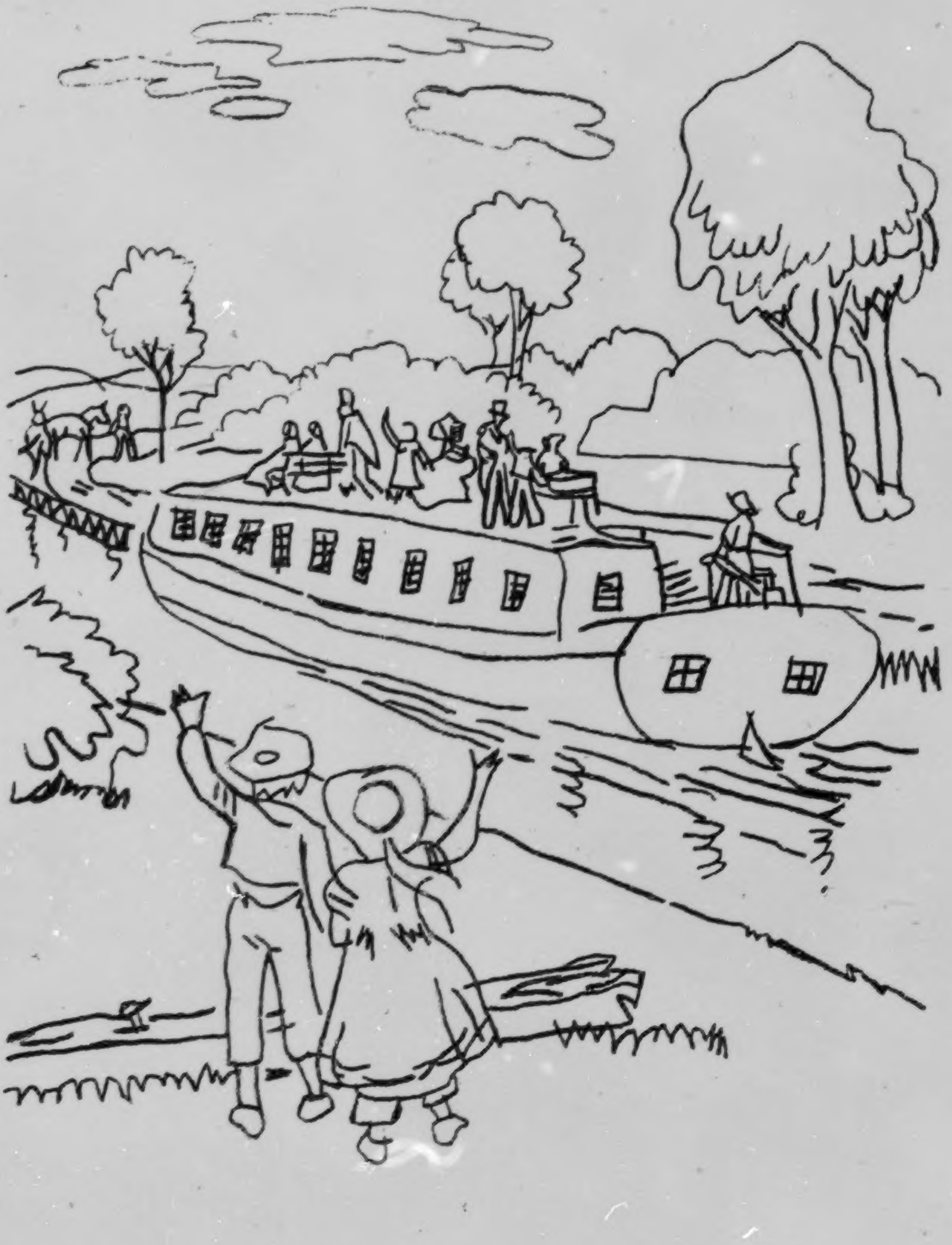
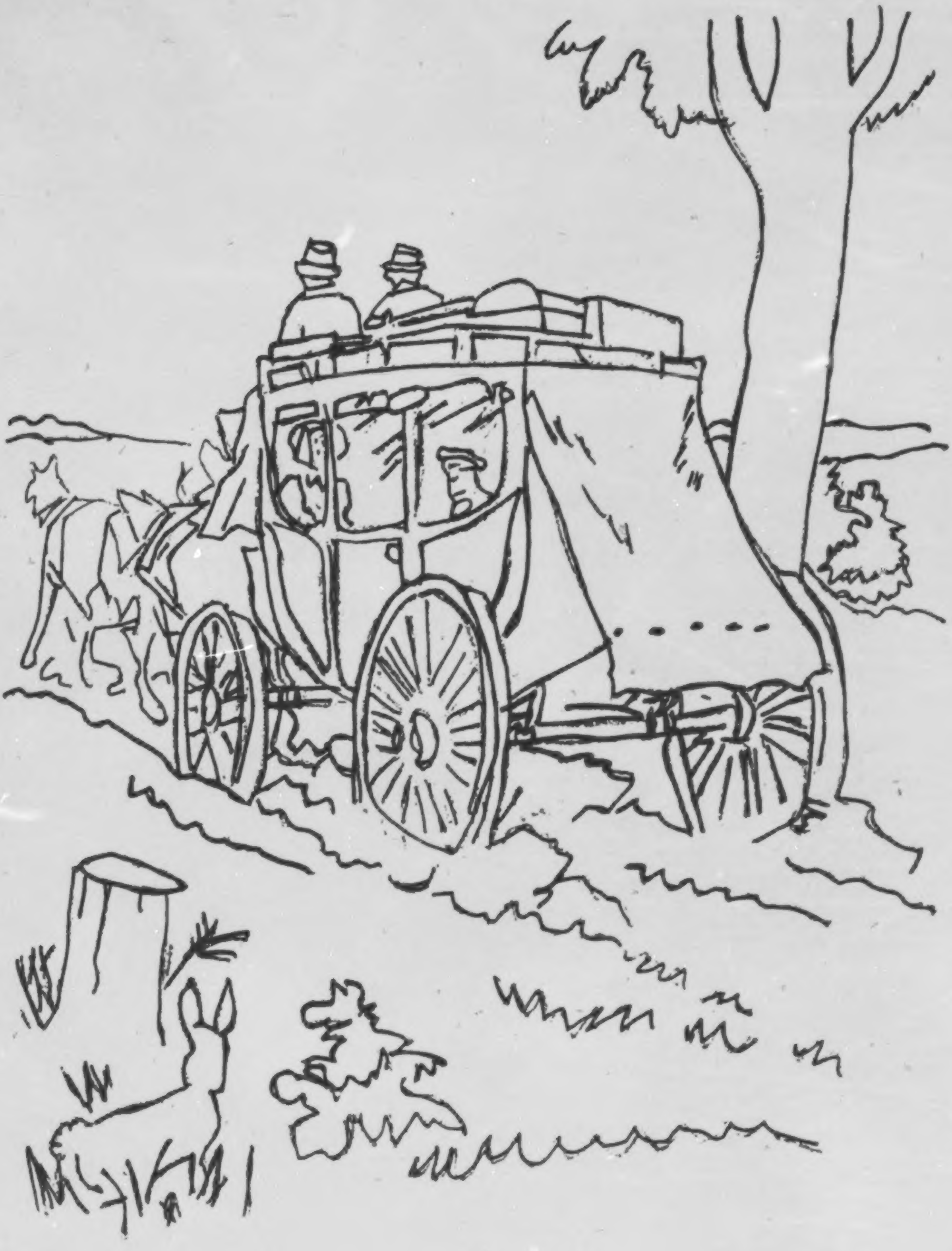
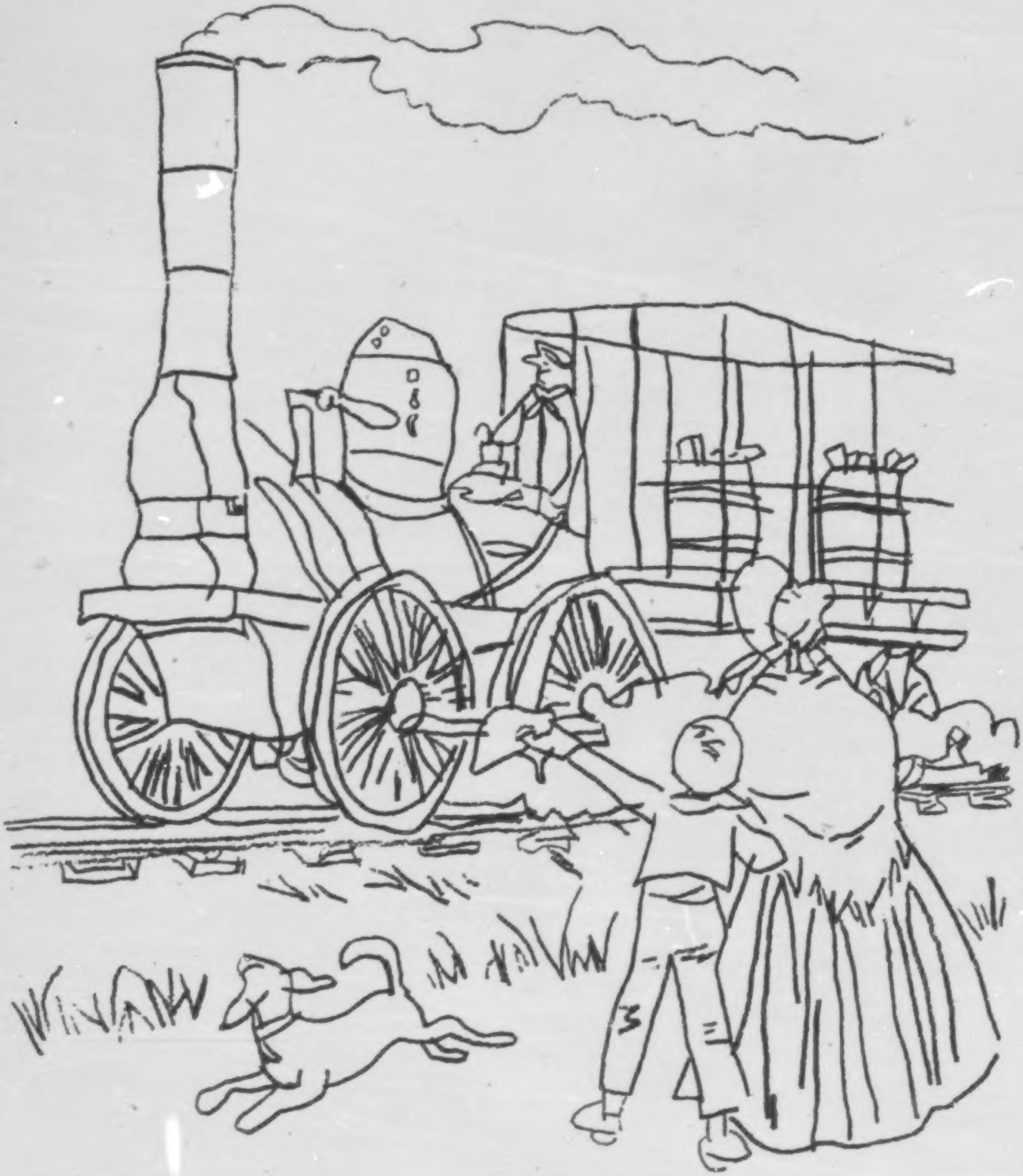
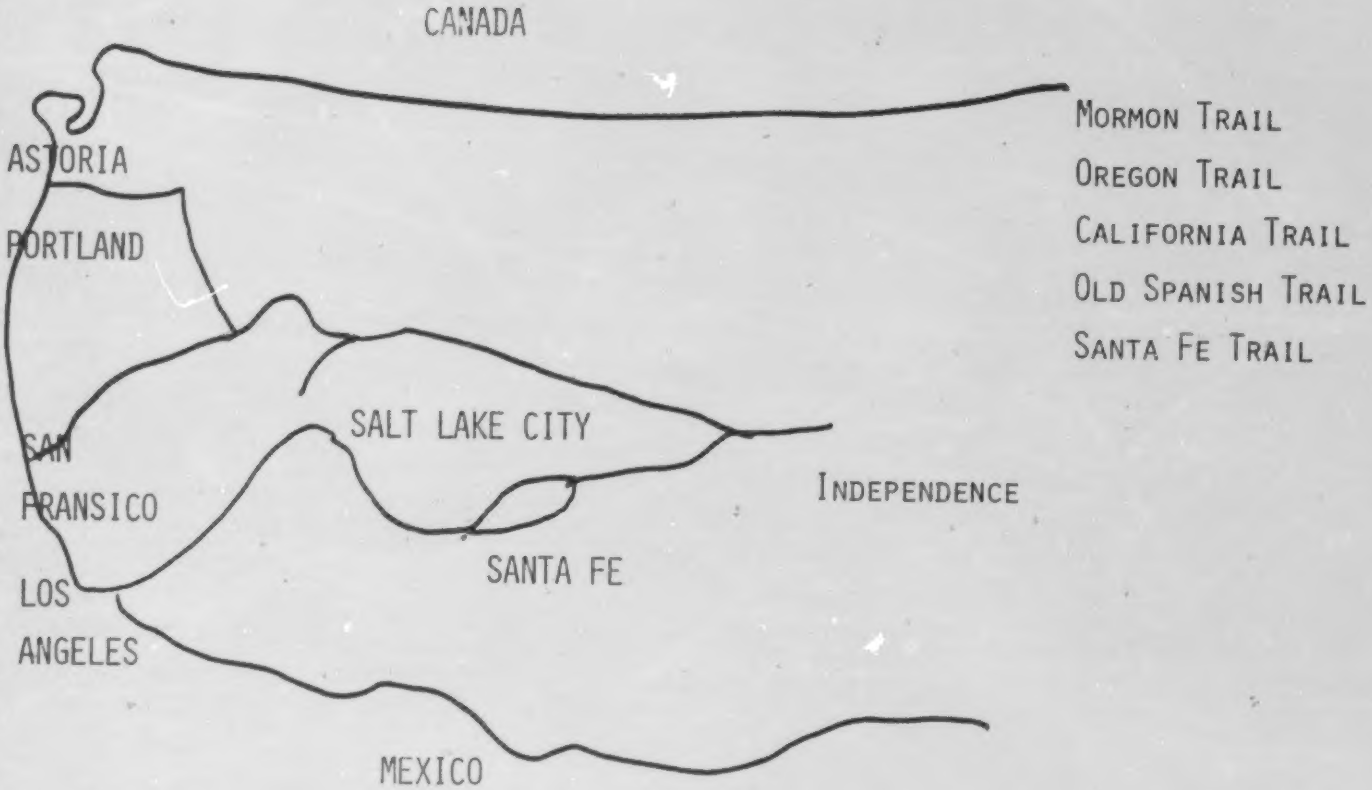








LABEL THE TRAILS ON THE MAP BELOW


CANADA
MORMON TRAIL
OREGON TRAIL
CALIFORNIA TRAIL
OLD SPANISH TRAIL
SANTA FE TRAIL
ASTORIA
PORTLAND
SALT LAKE CITY
SAN FRANSICO
INDEPENDENCE
SANTA FE
LOS ANGELES
MEXICO

## COMPLETE DAILY ITINERARY CHART

### Week One

| | Sunday | Monday | Tuesday | Wednesday | Thursday | Friday | Saturda |
|---|---|---|---|---|---|---|---|
| Morning | | | | | | | |
| Afternoon | | | | | | | |
| Evening | | | | | | | |

### Week Two

(Similar Chart)

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Group 1 - Route family takes from Illinois to California.

2 - Family packing household goods.

3 - Journey to Independence by flatboat or steamboat.

4 - Buying supplies and wagon at Independence.

5 - Starting out with wagon train- crossing swift stream.

6 - Camping with others from wagon train.

7 - Going through a mountain pass.

8 - Wagon train attacked by Indians.

9 - Stopping at a fort.

10 - Building new home in California.

Unit Title: TWO WORLDS MEET

I. Unit Overview: This unit begins the social studies curriculum in the fifth grade and is titled "Two Worlds Meet" because it is the study of how the Old and New Worlds came together. Beginning with a study of the cultures which existed prior to the explorer period in which America was discovered, this unit covers the cultures of the American Indian, Spanish, French, Vikings, English, Dutch and Portuguese peoples. Research includes a study of the lives of the people in 1470; the Crusaders and Marco Polo's journey; and the stories of the great explorers who united the two worlds. The study of the lives of the peoples include studies of their homes, schools, food, clothing, weapons, tools, art, science, religion, ways of making a living, customs, music, dance, and language. The students researching the American Indian will make similar studies and find out about the Indian's first coming to America.

The rationale for this unit is that it enables the students to learn the civilizations of the American Indians and the European Middle Ages cultures of that time, the reasons that brought about the meeting of the two worlds, and the importance to us today. This unit also gives the students skills in note-taking and writing research reports on the various phases of life of the period. It gives them a clearer understanding of this country's early beginnings, teaches them about the cultures from which most of their families have come, teaches them about cultures other than their own and gives them a better overall picture of the original contacts between the Old and New Worlds.

II. Unit Content Outline:

A. What was life like in these two worlds and how and why did they meet?
B. What was the climate and geography of America like in 1470?
C. What were some of the resources of America at that time?
D. Indians--types, location, names of tribes and lifestyle.
E. Explorers--names, country, dates, reasons for exploration, and importance.
F. Folkways of Indians, Spain, Portugal, England, France and Holland during the Middle Ages.

III. Unit Objectives: At the end of the unit, the student will be able to...

1. Compare the civilizations of the American Indians of 1470 with the European Middle Ages cultures of that time in Spain, Portugal, England, France, and Holland.
2. Name the countries responsible for the meeting of the two worlds and give the reasons that brought it about.
3. Gather data on the lives of the most important explorers.
4. Construct the homes, weapons, tools, clothing, crafts of both civilizations.
5. Identify the locations of the countries from which the explorers of the Middle Ages came and to trace their routes on a world map.

## IV. Unit Description:

A. Criterion-Referenced Objectives: At the end of the unit, the student should be able to...

1. Given a list of foods, types of clothing and types of housing, check those applying to the American Indians in 1470 and to the people of Medieval Europe.
2. List 3 tools and 3 weapons of the American Indians and 3 tools and 3 weapons used in Medieval Europe.
3. Given a description of the family structure and type of government, of the American Indian and the Medieval Europeans, correctly label each with the name of the culture to which it applies.
4. Write down the names of six (6) countries that sent out exploring parties to the New World.
5. Write one reason why each country sent out explorers.
6. Given a list of names, identify the most important explorers by circling their names.
7. Given lists of data such as names of explorers, countries represented, dates and places of discovery, reasons for the trip, hardships, the student will organize the data under the correct explorer's name by using it to write 2 sentences on each explorer.
8. Given a map of the world, students must be able to find and label the continents of Europe, Asia, Africa, North and South America, the Atlantic and Pacific Oceans; know and label routes taken by explorers and make a key showing countries which sent explorers.
9. Given world maps, locate the six (6) countries involved in exploration (Spain, France, England, Norway, Portugal, and Holland).
10. Given a list of four (4) occupations of Indians, and four (4) tribes, the student will correctly match the tribes with their main occupation.

B. Learning Activities:

1. Large group discussions-making comparisons.
2. Making maps showing routes of various explorers.
3. Research to find out how peoples of the European Middle Ages culture earned a living and also how the Indians in America at that time did.
4. Writing individual reports.
5. Oral reports in small groups to entire team on #3.
6. Construction of model homes, weapons, boats of the period.
7. Performance of skits relating to occupations of the period.
8. Skits
9. Folk dancing
10. Making charts and timelines
11. Bulletin boards-occupations European and American in 1470.

C. Materials:

1. Holt Databank System -- Inquiring about American History
2. Maps of the world, Datamasters, record players, projectors.
3. Art paper, crayons and pencils, clay paint, glue, cardboard, cloth, brushes, masking tape, and scissors.
4. Research books--Living in the Old World and Explorers

## PRE AND POST TEST

1.

| Foods | Clothing | Housing |
|---|---|---|
| potatoes | deerskin | teepee |
| beef | beads | castle |
| lamb | buffalo skin | hut |
| beans | cotton | cave |
| corn | wool | hogan |
| fish | mocassins | longhouse |
| barley | leather shoes | adobe |
| wine | sackcloth | carved cedar |
| rye | loincloth | palace |
| pumpkins | furs | igloo |
|  | silk |  |
|  | feathers |  |

Put a check mark beside those items which apply to the American Indians of 1470 and a circle beside those items which apply to Medieval Europe.

2. List 3 tools and 3 weapons of the American Indians and 3 tools and 3 weapons used Medieval Europe.

3. Label the descriptions below with "American Indian" or "Medieval Europe":

   a. tribe, tribal chief, council, meetings of all tribe members, democratic decisions of the majority.

   ______________________________

   b. King, lords, vassals (lower nobility), serfs (slaves), decisions made by the kings and lords.

   ______________________________

4. Write down the names of six (6) countries that sent out exploring parties to the New World.

5. Write one reason why each country sent out explorers.

6. Circle the names of the famous explorers from the list of names:

   a. George Washington
   b. Christopher Columbus
   c. Ferdinand Magellan
   d. Abraham Lincoln
   e. Daniel Boone
   f. Samuel Champlain
   g. John Cabot
   h. Leif Ericson
   i. Francis Drake
   j. Vasco Da Gama
   k. John Lennon

PRE AND POST TEST (con't)

7. In the columns below there is information in each column. Using the information for each explorer that you know, write two (2) sentences about each explorer using the correct name, country, date, discovery, and reason for each. The information is mixed up and is for you to organize and then write your sentences.

| NAMES | COUNTRY | DATE | PLACES DISCOVERED | REASONS |
|---|---|---|---|---|
| Columbus | Spain | 1534 | sailed around world | get Spain gold |
| Drake | France | 1519 | San Salvador | find water route to Ea |
| Magellan | England | 1000 | St. Lawrence River | Adventure |
| Cartier | Norway | 1492 | Finland | found new France |
| Leif Ericson | Spain | 1577 | sailed around world | find water route to E |

8. On the attached world map, find and label the continents of Europe. North and South America, Africa, and Atlantic and Pacific Oceans, Asia. Plot the routes of Columbus, Drake, Ericson, Cartier. Make key showing which countries sent which explorers.

9. Match the Indian group in Column A with their principle way of making a living in Column B.

| A | B |
|---|---|
| Iroquois | hunting buffalo |
| Cheyenne | fishermen |
| Pueblo | hunting-woodlands |
| Chinook | shepherds |

Unit Title: WHO DISCOVERED AMERICA

I. Unit Overview: "Who Discovered America" focuses on six groups of people who claim to have come to America: Columbus and his followers, the Indians, the Vikings, the Chinese, the Phoenicians, and the Egyptians. The students will learn something about the traditions of the different groups, but the main purpose of the unit is to introduce and give the students experience in working with the different types of historical evidence they will be using throughout the year. The students will consider supporting and opposing evidence for the claims of each group. Written accounts, maps, oral tradition and archeological findings will help the students determine whether or not it is possible or probable that the group arrived in America.

This unit is introduced after "Two Worlds Meet" to give the student the opportunity to examine historical evidence, and to make judgements based on this examination.

II. Unit Content Outline:
   A. What was Columbus' real name?
   B. Did Columbus really discover America?
   C. Did the Indians?
   D. Animals and Foods in the New and Old World.
   E. Did the Vikings arrive before Columbus?
   F. Archeology and the Vikings.
   G. Did the Chinese?
   H. Did the Phoenicians?
   I. Did the Egyptians?

III. Unit Objectives: At the end of this unit, the student will...
   1. be able to compare variant spellings of Columbus' name in an attempt to determine which was his correct name.
   2. Using the criteria of "possible," "probable," or "really happened," be able to classify various theories concerning the discovery of America by six different groups of people.
   3. Devise a key and draw conclusions from a map which shows the major animals and foods in the Old and New Worlds by 1492.
   4. Construct a time line which will visualize the time relationships between the different groups whom they studied in connection with the discovery of America.
   5. Compare a European water craft of the Middle Ages and a water craft of the American Indians before the discovery of America.
   6. Determine from a list which occupations would most likely belong to one Indian or European culture or another.

IV. Unit Description:

   A. Criterion-Referenced Objectives: At the end of this unit, the student will be able to...
      1. Given five (5) spellings of Columbus' name, the students will relate who spelled it in the various ways, the author's relationships with Columbus and the dates the various spellings were written.

2. Given the previous information, justify the basis upon which the decision as to the most correct spelling made.
3. Name the six different groups of people said to have discovered America.
4. Given the six (6) groups of people, describe the theory by which each is given credit for having discovered America.
5. Distinguish between "possible," "probable," and "really happened."
6. Classify theories as to the discovery of America as to "possible," "probable," and "really happened."
7. On a map on Foods and Animals of the Old World and New Worlds in 1492, locate the Old and New World.
8. Construct a key showing the animals and foods of the Old and New Worlds in 1492.
9. Name four (4) major foods of each region.
10. Given a time line, plot the dates on which the six (6) groups are said to have discovered America.
11. Given the names of canoes and longboats of American Indians, and sailboats of Egyptians, Vikings, Chinese and Columbus, describe materials of which they were made, and sizes and speeds of the vessels.
12. Given the above information, cite two (2) likenesses and two (2) differences between Indian boats and European vessels.
13. List one occupation you would have if you were a Plains Indian, an Eastern Woodland Indian, a Northwest Coast Indian, or a Navajo Indian.
14. Given the names of the six (6) groups of people; Egyptians, Columbus, Phoenicians, Chinese, Indians, Vikings; select from a list of occupations the cultures into which they would best fit.

B. Learning Activities:
1. Choose a craft from one of the six (6) groups of people in the unit, and either make a sample or demonstrate to the class where and when it's from and how to do it. Also its value to the culture.
2. Draw pictures of various American Indian crafts before the discovery of America.
3. Draw pictures and describe various crafts and occupations of the Middle Ages in Europe.
4. In a group of about six (6) people, present a panel discussion of persons representing the various occupations of the time with one half of the group in favor of forming trade guilds and half against.
5. Examining evidence as signature, old maps, charts, archaeological findings.
6. Reading sagas.
7. Making maps, seeing pictures.
8. Finding differences and similarities.

9. Evaluating evidence and drawing conclusions.
10. Art work on phases of culture.
11. Writing of original plays.
12. Making time lines.
13. Listening to records.
14. Making puppets on early people and their occupations.

C. Materials:

1. Holt Databank System- Inquiring About American History.
2. Maps of the world.
3. Record player.
4. Art paper, crayons.
5. Puppet theater for plays on "Building the Chinese World," "A Viking Funeral," "Building a Pyramid," and "Building a Phoenician Ship."

## PRE AND POST TEST

1. Circle the correct spelling of Columbus' name and write the reason why.

   a. Christoforus Colom
   b. Christophorus Colonus
   c. Christofora Colona
   d. Christophorus Columbi
   e. Cristofora Colombo

2.

|  | Possible | Probable | Really Happened | Reason for Choi |
|---|---|---|---|---|
| Columbus |  |  |  |  |
| Vikings |  |  |  |  |
| Chinese |  |  |  |  |
| Phoenicians |  |  |  |  |
| Indians |  |  |  |  |
| Egyptians |  |  |  |  |

   In the above, check appropriate columns as to whether any of these groups of people discovered America. Write 2 reasons below for each check.

3. On the attached map of foods and animals of the Old World and New World in 1492, devise a key and then place the symbols for foods and animals at the proper locations on the map.

4. 12,000 /500 /BC /AD /458 /1000 / 1492

   On the time line above, write the names of the people who could have discovered America at those respective times.

5. List 2 likenesses in the boats of the American Indians, Egyptians, Vikings, Chinese and Columbus' such as materials used, size and power.

6. List 2 differences in the boats of the American Indians, Egyptians, Vikings, Chinese and Columbus' such as materials, size and power.

7. List 1 important occupation you would have if you were a Plains Indian, and Eastern Woodlands Indian, Northwest Coast Indian or a Navajo Indian.

8. From the occupations listed below, write after them the culture or cultures they might have fit using the 6 different groups who are thought to have discovered America.

   a. silk-weaving
   b. pagoda builder
   c. tribe chief
   d. masthead carver
   e. sail maker
   f. spice dealer
   g. pyramid designer

# SCIENCE

Unit Title: EARTH IN SPACE

I. Unit Overview: The unit "Earth in Space" is founded around Isaac Newton's three universal laws of physics; the law of universal gravitation, the law of inertia, and the law of action and reaction. Through discussion and investigation the student will learn how these laws effect the motion of planets, rockets, or people on earth or out in space. The student will then, using these concepts, learn how space flight is possible and how it is necessary to have an achieved it. The unit will also deal with an early history of un-powered and powered flight and carry this history of events up to the present. Incorporated into the unit are many career related activities.

II. Unit Content Outline:
  A. Law of Universal Gravitation
    1. man on the earth
    2. mass, density, size
    3. moon, sun, tides
  B. Law of Action and Reaction
    1. balanced and unbalanced forces
    2. thrust, escape velocity
  C. Law of Inertia
    1. objects at rest and in motion
    2. balance between gravity and inertia
    3. orbital mechanics, centrifical force
  D. Solar Mechanics
    1. Earth's Rotation
      a. time zones and temperature zones
      b. angle of inclination
    2. Earth's Revolution
      a. shape of revolution around sun
      b. distances at apogee and perigee
      c. seasons
      d. plane of the ecliptic
    3. Orbits
      a. planets, comets, moon, asteroids
    4. Origin theories
      a. earth and solar system
  E. History of Flight
    1. Mythology and rocketry
    2. balloons, kites and glider, and airplanes.
  F. Space Vehicles
    1. Rockets
      a. early rockets and rocketeers
      b. solid fuel rockets and liquid fuel rockets
      c. single and multi- stage rockets
    2. Satellites
      a. Scientific research types, communication types, and explorer types
    3. Landing Vehicles
      a. LM-2 and others

4. Who and What is necessary to get a rocket into the cosmos?
    a. Types of people
        1. careers
        2. education
    b. Types of materials
    c. Organizations and finance

G. What does the future hold?
    1. Possible flights to planets
    2. Trips to the stars
    3. Contact with other life forms

III. Unit Objectives: At the end of this unit, the students will be able to...

1. demonstrate Newton's three universal laws of physics.
2. illustrate the earth's motion in space.
3. cite different theories of the earth's origin.
4. illustrate on a time line the ideas and consequences in man's attempts to fly, which caused him to achieve his goal and venture forth to space travel.
5. explain likes and differences between the varied types of rockets and space vehicles.
6. explain why it is necessary to have the cooperation of myriad of peoples and jobs to accomplish space flight.
7. discuss the out-look of space flight in the earth's future.

IV. Unit Description:

Unit Objective #1: the student will demonstrate Isaac Newton's three universal laws of physics.

Sub-Unit: Law 1. The law of universal gravitation.

A. Criterion-Referenced Objectives:
    1. Given a list of five (5) planet gravitational pulls and a given person's weight, the student will be able to find the corrected weight of that person, if that person were standing on each of the given planets. The minimum acceptable performance would be at least four (4) or five (5) correct responses.
    2. Given a diagram of a person, and a weight for said person, the student will be able to state what that person's mass and weight would be on the moon.
    3. Given a period of time, as determined by the teacher, for research and note taking, the student by performing experimentation will determine that gravity acts on 10 given objects with approximately the same force. This determination will be given by the student in written form, and its acceptability determined by the teacher.

B. Learning Activities:
    1. The teacher will bring in a bathroom valance. The students will all record their weights. A discussion about what weight is and how it relates to gravity should be held. A lecture dealing with the gravitational pull of the earth and how it relates to the other celestial bodies will be presented. The teacher will put a chart on the board

showing the actual standard units to show the pull of gravity on all the planets, the earth's moon, and the sun. Examples of what a person's weight would be on these bodies will be formulated. This chart and the examples will be copied by the students and put into a folder. This folder, each child will have his own, will be constructed by the students from 8" x 11" construction paper and loose leaf paper. The students will put the unit title on the front and decorate it as they wish. All notes, diagrams, charts and research data will be put into this folder, to be used as a study guide.

C. Materials:
   1. Books:
      a. Concepts in Science; Teachers Edition; Harcourt, Brace, and World.
      b. World Book Encyclopedia
      c. Science 5; second ed.; Smith, Blecha, Sterning; Laidlaw Series; pages 147-160.
      d. Science in Our World 5; Heath; copyright 1968.
   2. Bathroom scale, chart paper, overhead, construction paper, crayon, stapler, loose leaf paper.

B. Learning Activities:
   2. After a review on gravity the teacher will define the term "mass." Examples of weight and mass will be discussed, using pictures, overheads, or drawings. With further discussion a formalized definition of "mass" will be written and the students will enter it into their unit folders. The child will be assigned pages 92 through 98 from Concepts in Science 5 (Brace, Harcourt, and World). On the preceeding day a discussion of what was read will be presented.

C. Materials:
   1. Overhead
   2. Concepts in Science 5 (Harcourt, Brace, and World)

B. Learning Activities:
   3. Using a large step ladder or ladders (caution for student safety should be taken) the students will run experiments on the rate of fall of 10 given unbreakable objects, such as different size balls, feathers, stones, cushions, etc. The 10 separate objects will be dropped from a standard height and their rate of descent time by stop watches. The students will do this in small groups, graphing and calculating their data. At the end of their experiments each student will write a one page report giving an hypothesis of what he or she observed.

C. Materials:
   1. Step ladder 7 inches or higher, stopwatch, metric balances, graph paper.

Unit Objective #1: The student will be able to demonstrate Isaac Newton's three Universal Laws of Physics.

Sub-Unit: Law 2. The Law of Action and Reaction.

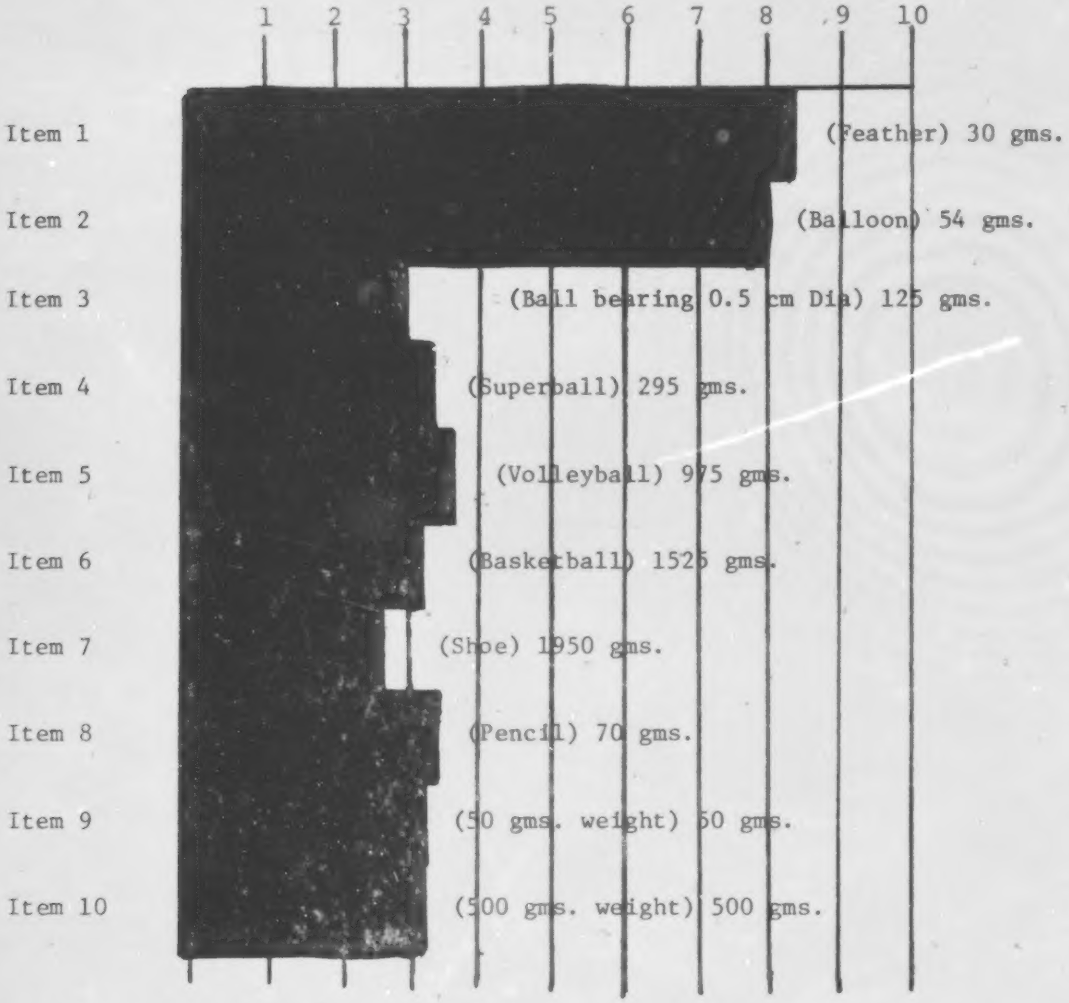
A. Criterion-Referenced Objectives:
   1. Given a diagram of a rocket and a thrust arrow, the student will be able to label the parts of the rocket and designate the direction it will travel.
   2. From his notes, the student will be able to do 2 out of 3 experiments covered and write a short synopsis of the chosen two. Acceptable behavior will be determined by the teacher.
   3. Given a list of 5 definitions the student will be able to circle the definition of Action and Reaction.

B. Learning Activities:
   1. In a laboratory situation, the teacher will demonstrate, by using a balloon, how compressed air escaping from the balloon in a backward motion, pushes the balloon in the opposite direction. To further prove this point the teacher will construct a balloon rocket and attach it to a string. The children will observe the action of the rocket on the string when the valve is opened. After a discussion of what occurred, the teacher will blow the balloon up, putting more air inside of it this time, and releasing it. The students will observe what happens this time. The question will be posted by the teacher, "Why did the rocket go further this time?" A short discussion will deal with this question, then the student will split up into small groups. These groups will construct their own balloon rockets, running tests on them to determine how the amount of air pumped into the balloon forces the balloon to travel further along the string. The students will chart their data and discuss its implications. Then the teacher will put a diagram of a rocket on the board and the students will discuss how the balloon and the rocket are alike. A filmstrip, "How the Jet Engine Works," will be shown. From this or other references material the teacher will label the appropriate parts of the rocket, then have the students copy this information to be put into their science folder for further study. The teacher will then assign pages 99 through 105 in Concepts in Science 5.

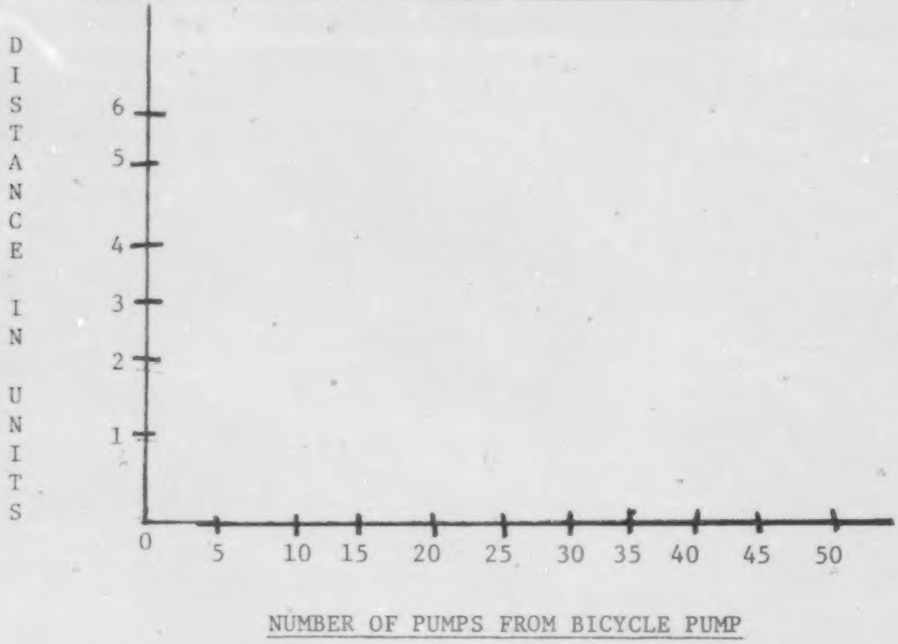
C. Materials:
   1. Balloons, kite string, eye droppers, straws, masking tape, meter sticks, bicycle pumps.
   2. Concepts in Science 5; Harcourt, Brace, and World TE; copyrite, 1966.
   3. Filmstrip:
      a. "How a Jet Engine Works" - The American Gas Assoc., Inc.

Example of Student Data Chart

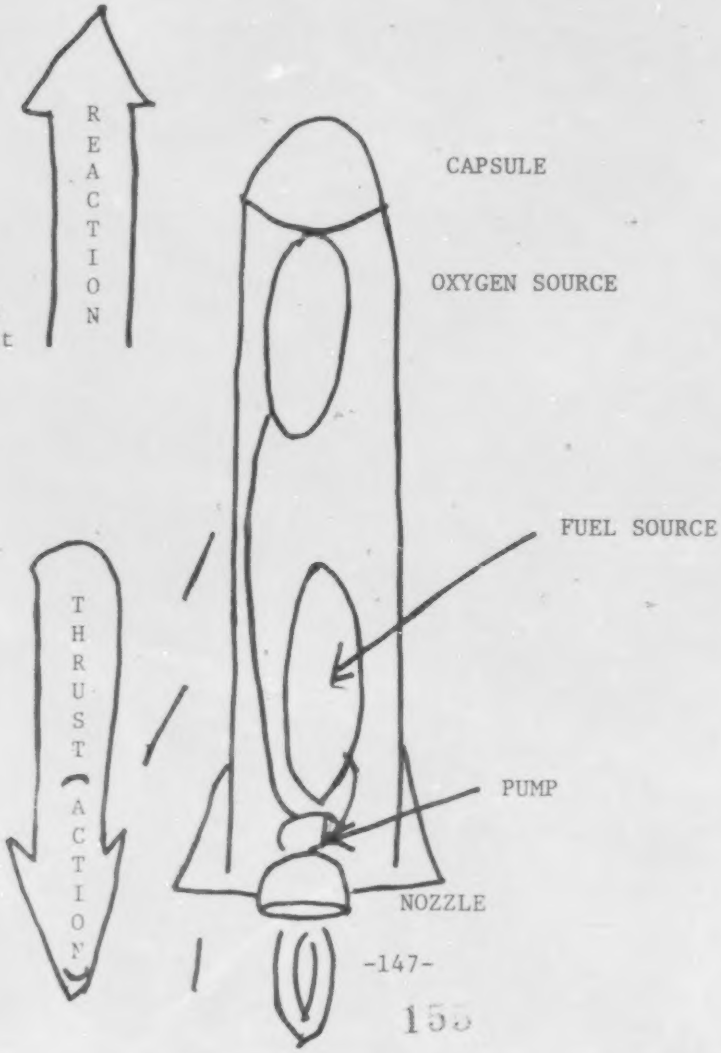
Time in Seconds / STD. Drop 2.5 Meter



1. Example of Chart for Action and Reaction Data



2. Example of single-stage liquid rocket


REACTION
CAPSULE
OXYGEN SOURCE
FUEL SOURCE
THRUST (ACTION)
PUMP
NOZZLE

2a. The teacher will have the students line up around the wall of the room, hands chest high facing the wall. The students will be directed to place their hands against the wall, at the same time bringing their feet close together. The students will then be directed to push against the wall with a force. They will be directed to notice which direction they are pushing and which direction their bodies are going. A discussion of how action and reaction phenomenon affect not only rockets but all places where force is applied. Other examples, such as stepping from a rowboat will be discussed. Notes from this experience will be entered in the students science folder.

2b. Next the teacher will construct a steam operated rocket from a metal film canister or like object. This steam rocket will be hung from a string attached to the framing of the lab table. After filling the canister half filled, a bunsen burner is used to heat the canister up. The boiling steam escaping through the tiny hole in the back of the canister starts it to be propelled forward. This set up looks like a rocket i.e., the rushing steam looks like smoke. Have students observe what is happening and discuss their observations. They will take notes and put those in their folders.

C. Materials:
   1. 35 mm Metal Film canister, string, screw eye, water, bunsen burner, Metal punch, lab table.

Unit Objective #1: The student will be able to demonstrate Isaac Newton's three Universal Laws of Physics.

Sub-Unit: Law 3. The Law of Inertia

A. Criterion-Referenced Objectives:
   1. The child will be able to write a devinition of "Inertia" without the aid of books or notes, with acceptibility determined by the teacher.
   2. When presented with a diagram showing a ball being hung on a string, where the string has just been cut, the student will be able to draw on the diagram the motion and direction the ball will take without the aid of books or notes. The child's performance will be judged by the teacher.
   3. Given a list of six (6) pictures depicting states of inertia, the student will be able to divide these pictures into those which follow Newton's Law of Inertia Part I, i.e., objects at rest, remain at rest, and those whith follow Part II, i.e., objects in motion, tend to remain in motion, five (5) out of six (6) correct will be the least acceptable performance.

B. Learning Activities:
   1. The teacher will take a marble and roll it across a smooth level surface. The students will be asked to observe its motion. Did it travel in a straight line? Did it stop by itself? Why did it keep going after the force was let go? The instructor will then spin a bicycle wheel on a stand. The children will observe its spinning motion. The teacher will begin a discussion by asking, "Why does the wheel remain spinning?"

DIAGRAM OF WALL PUSHING ACTIVITY:

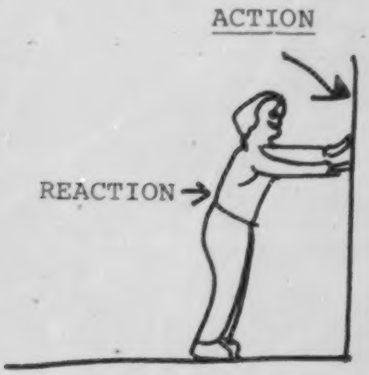
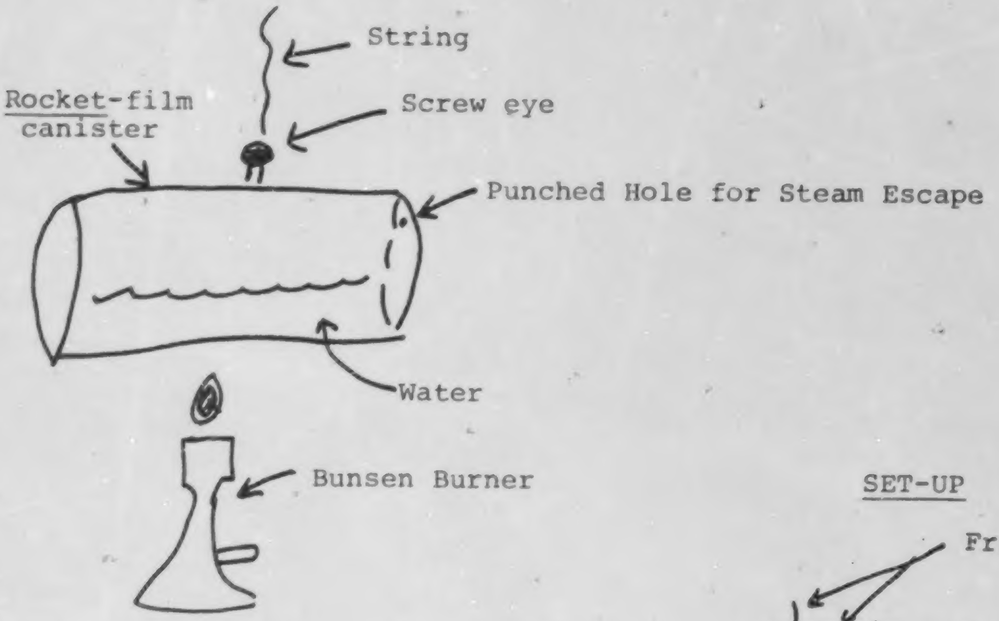
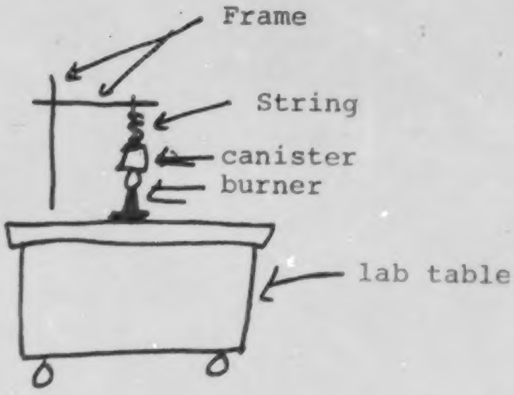

ACTION
REACTION

DIAGRAM OF STEAM ROCKET AND ITS SET-UP:


String
Rocket-film
canister
Screw eye
Punched Hole for Steam Escape
Water
Bunsen Burner

SET-UP


Frame
String
canister
burner
lab table

The teacher will then show how it is necessary to supply an external force to cease the motion of the wheel.

2. Next a ball hung from a string will be spun around by the teacher. "If I let it go, what direction will it take?"; will be discussed. Given puff balls and string the students will investigate the action of the spinning balls.
3. A filmstrip on "The Earth and Its Movements" will be shown. After a discussion about this film and what observations the children already made a formal definition of Inertia will be formulated. The children will enter it into their notes.
4. The children will be assigned pages 106 through 110 in Concepts in Science 5(Harcourt, Brace, and World).

C. Materials:

1. Marbles, bicycle wheel, puff balls, kite string.
2. Filmstrip: "The Earth and Its Movements," SVE, Inc.; A-409-6; and record.
3. Books: Concepts in Science 5 (Harcourt, Brace and World) Motion- Investigating Science with Children/ Vol. 4, Teachers Publishing Corp.; Darien, Conn.

Unit Objective #2: The student will be able to illustrate the earth's motion in space.

A. Criterion-Referenced Objectives:

1. Given a sheet of paper and crayons, the student will draw a diagram depicting the earth in its relation to the sun, labeling direction of rotation, and four seasonal periods, direction of revolution, shape of orbit, angle of axis and speed of rotation. The criteria for acceptable performance is 80% as determined by the instructor.
2. Given a map of the world with meridians on it, the student will be able to convert a time from one meridian to its corresponding time on another meridian. Out of five (5) such problems the student will have to have at least three (3) correct.

B. Learning Activities:

1. Illustrate the earth's motion in space, The teacher will start a discussion with the question, "Where do we really live?" Points to be included are:
   a. We live on a continent, in the western hemisphere, which is on a world called "earth."
   b. Earth is part of a group of planets which revolve around a sun. This group is called the Solar System.
   c. This Solar System is part of a larger assembly of stars called "Milky Way" galaxy.
   d. This galaxy is part of a vast assembly of galaxies called the universe.
2. Many transparencies are available to depict the above mentioned scenes.
3. The teacher will show or review the filmstrip "The Earth and Its Movements."

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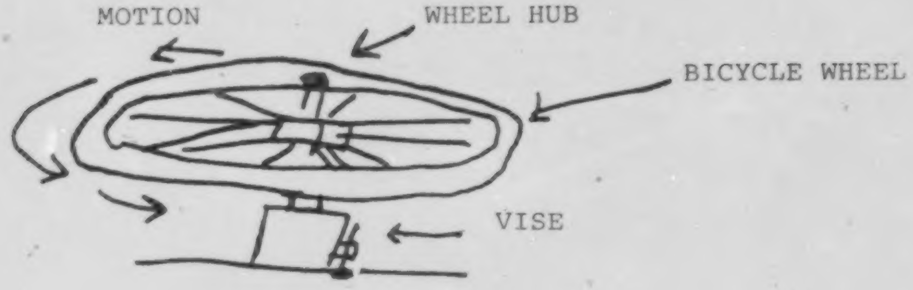
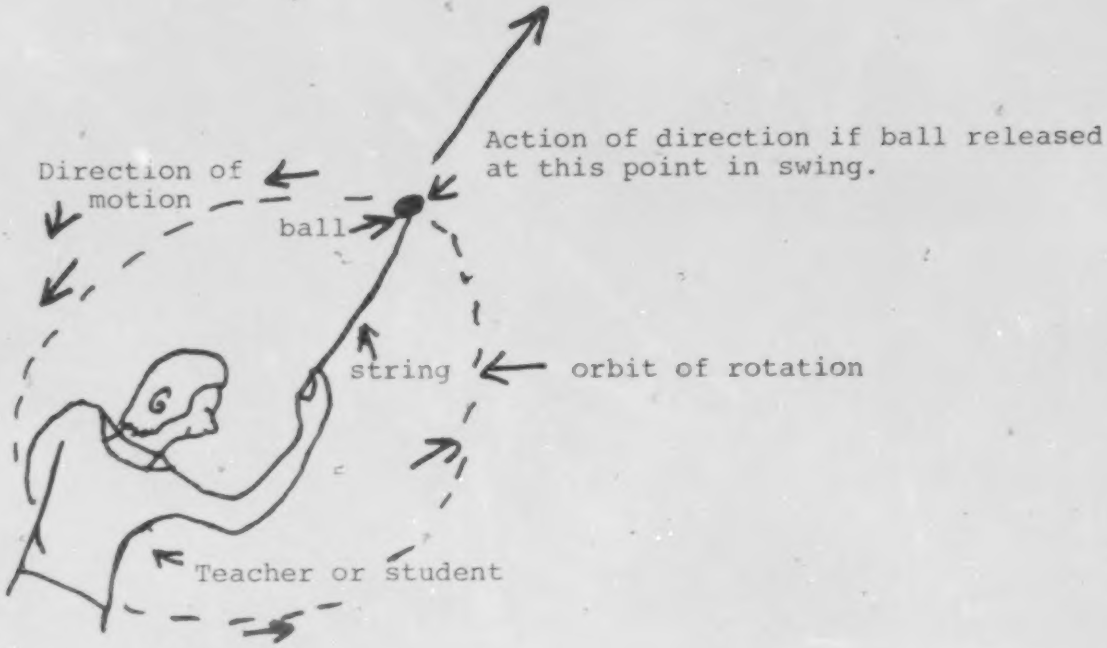

MOTION
WHEEL HUB
BICYCLE WHEEL
VISE

DIAGRAM OF PUFFBALL ACTIVITY:


Action of direction if ball released at this point in swing.
Direction of motion
ball
string
orbit of rotation
Teacher or student

4. A diagram of the earth and its relation to the sun will be put on the board for the students to copy.
5. The teacher will give a lecture dealing with the physical aspects of the earth. This will include:
    a. Rotation
        1. Speed of
        2. Time Zones
        3. Meridians
        4. Angle of Inclinations**
    b. Size
        1. Diameter
        2. Circumference
6. To reinforce the idea of time zones, the teacher will put several examples on the board and discuss them. Then a ditto of the earth with time zone meridians drawn on it will be passed out. The students will be given problems to be solved concerning these time zones and a discussion will follow.
7. The teacher will present a lecture on the earth's motion around the sun.
    a. How far away
    b. Shape of orbit
        1. Apogee
        2. Perigee
        3. Equinoxes
        4. Speed of revolution
        5. Seasons or relation to place on orbit
8. The teacher will now have the children make a diagram of the earth's movements, labeling:
    a. Shape of orbit
    b. Direction of revolution
    c. Angle of inclination
    d. Apogee-perigee-equinoxes
    e. Seasons
    f. Distance from sun
9. The teacher will give a review of the earth's motion.
10. Quiz

C. Materials:
1. Transparencies:
    a. "The Solar System and Space Travel"-grades 5 to 9; Ortleb and Cadic Milikan Publishing Co.,
2. Maps of earth looking down from the North Pole with meridians on them.
3. Filmstrips: "The Earth and Its Movements"- SVE, Inc.; A409-6.
4. Books:
    a. World Book Encyclopedia- Field Enterprises
    b. Motion- Nation Science Teacher Assoc., Teacher Publishing Corporation; Darien, Conn.; Vol. 4.
    c. Physical Geography

DIAGRAM: ANGLE OF INCLINATION

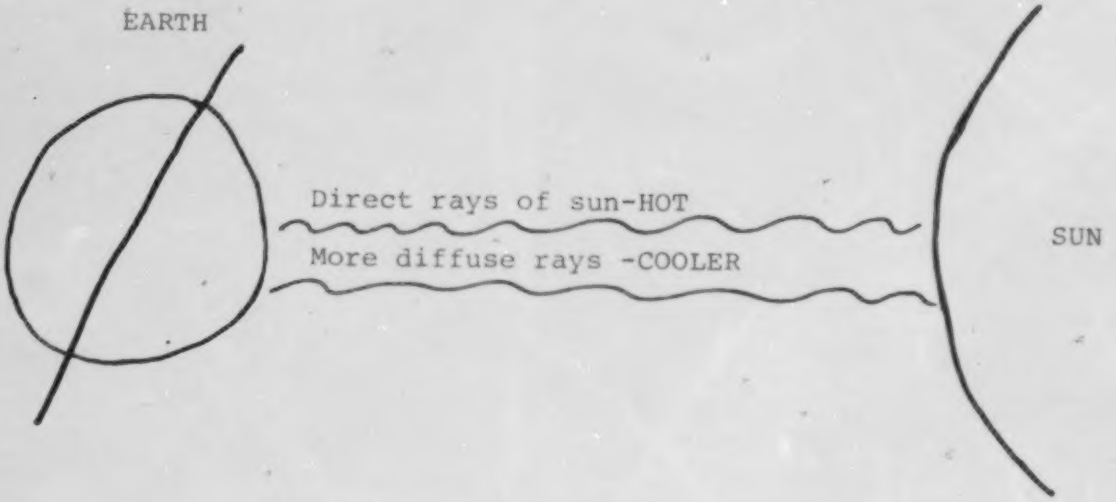
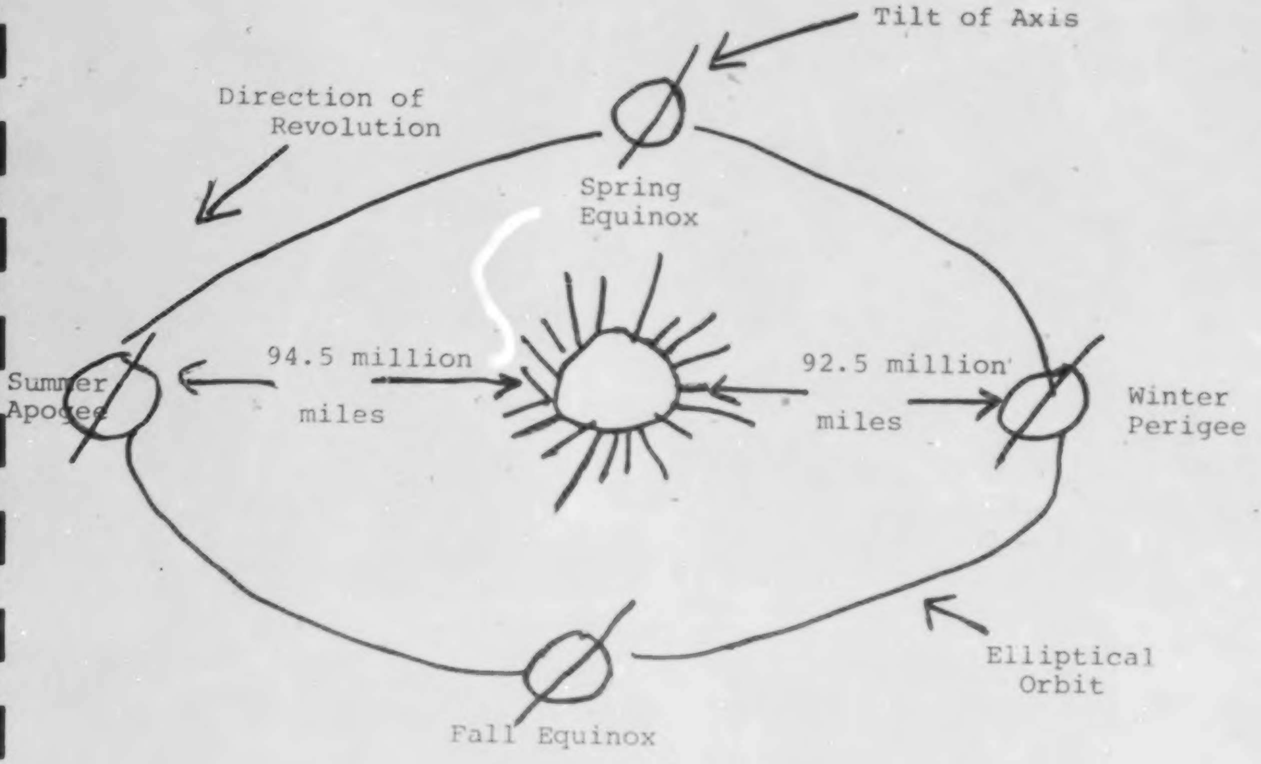

EARTH
Direct rays of sun-HOT
More diffuse rays -COOLER
SUN

DIAGRAM: EARTH'S MOTION IN ORBIT


Tilt of Axis
Direction of Revolution
Spring Equinox
Summer Apogee
94.5 million miles
92.5 million miles
Winter Perigee
Elliptical Orbit
Fall Equinox

Unit Objective #3: The student will be able to cite different theories of the earth's origin.

A. Criterion-Referenced Objective:
   1. By the use of the text books and research notes the student will write a two paragraph report stating at least two of the theories pertaining to the earth's origin. The teacher will determine performance criteria.

B. Learning Activities: Cite theories of earth's origin.
   1. Using pictures or transparencies the teacher will present the three (3) basic theories of the earth's origin.
      a. The LaPlane theory
      b. The Planetesimal theory
      c. The Dust Cloud theory
   2. Discuss these theories have the children take notes.
   3. Have the students read pages 113 through 115 in Concepts in Science 5 for more information on the earth origin theories.
   4. Discuss all these theories.
   5. Have students write a two paragraph report on two of these theories picking out how they are alike and different.

C. Materials:
   1. Transparencies: "The Solar System"- Millikan Publishing Co., copyright, 1968.
   2. Books: Concepts in Science 5; Harcourt, Brace, and World.

Unit Objective #4: The student will be able to illustrate on a time line the ideas and consequences in man's attempt to fly, which caused man to achieve his goal and venture forth toward space travel.

A. Criterion-Referenced Objectives:
   1. Given a time line and a list of 10 events of historical achievements in manned flight, the student will arrange these events in chronological order from oldest to newest on the time line. Performance criteria being at least 70% correct.
   2. Given a list of inventors, explorers and adventurers the student will match them with a given list of their accomplishments, 80% correct responses being minimum acceptable performance.

B. Learning Activities: Illustrate on a time line.
   1. By lecture and discussion the teacher will present a short history of manual flight from mythology to space travel using the following outline.
      a. Pre-flight myths and legends
         1. Icarus and Saedalus
         2. Roman and Greek Gods
            a. Apollo
            b. Mercury
         3. Bible- Elijah
         4. Tower Jumpers
         5. Leonardo Da Vinci's ideas

- b. Balloons
  - 1. montgolfier brother
  - 2. zeppelins
- c. Gliders
  - 1. early Chinese kites
  - 2. Otto Lilienthal
- d. First Powered Flight
  - 1. Langley
  - 2. Write Brothers- 1903
- e. Powered Flight
  - 1. Crossing English Channel- 1906- Louis Bleriot
  - 2. Crossing America- 1911- C. Perry Rogers
  - 3. First Trans-Atlantic Flight- 1919- Lt. Commander Read and Crew
  - 4. First non-stop Trans-Atlantic Flight- John Alcock and Arthur Brown
  - 5. First Around the World Flight- 1924- U.S. Army Pilots
  - 6. First Solo-Trans-Atlantic Flight- 1927- Charles Lindberg.
  - 7. First Solo-Trans-Atlantic Flight by a woman- 1932- Amelia Earhart
  - 8. First Jet Propelled Flight- 1939- Heinkel- Germany
  - 9. First faster-than-sound Flight- Bell X-1- Charles Yeager
  - 10. First man-made satellite- Sputnik- Russia- 1957
  - 11. First Astronaut in Orbit- 1961- Gregarin- Russia
  - 12. First American Satellite-
  - 13. First American Astronaut in Orbit- John Glenn
  - 14. First men on the moon- Armstrong, Adlrin, Collins- 1969
  - 15. Exploration Satellites- Pioneer, Marimer, and Explorer
- f. Types of people who were pioneers in manned flight
  - 1. Scientists
    - a. Rozier
    - b. Sir George Cayley
    - c. Professor Charles- French
  - 2. Mathematicians
    - a. Newton
    - b. Others
  - 3. Kings
    - a. King of Portugal
    - b. King of Britain
  - 4. Priest or Clergymen
    - a. Father Guamo
  - 5. Artists and Designers
    - a. Da Vinci
  - 6. Mechanics
    - a. Write Brothers

2. The children will then make up a time line using the greatest ideas and achievements of manned flight.
3. A list of the most famous inventors and adventurers will be made up along with what they did and put into the students folder for further study.

C. Materials:
  1. Books:
    a. World Book Encyclopedia- Field Enterprises
    b. National Air and Space Museum; Publication-Smithsonian Institution; Washington, D.C.
    c. Above and Beyond; Vol. N- Introduction to Aerospace Education; New Horizon Publishers, Inc.; Chicago, Ill.
    d. The Doubleday Pictorial Library of Science (Chemistry, Physics, Astronomy); Doubleday and Company, Inc.
  2. Projectors:
    a. Overhead
    b. filmstrip
    c. opaque

Unit Objective #5: The students will be able to explain the differenc between types of rockets and space vehicles.

A. Criterion-Referenced Objectives:
  1. Given a list of rocket adjectine items, the student will be able to group these items according to which type of rocket they characterize. The percentage of acceptable performance is 80%.
  2. Using only their class notes the student will write a paragraph, in which he will explain the difference and likes of two types of rockets. The teacher will set the criteria for acceptable performance.

B. Learning Activities: Explain the differences between rockets.
  1. Rockets
    a. The teacher will present a short picture presentation of the history of rockets and rocketry, according to the following outline:
      1. Chinese Fireworks
      2. Goddards Rockets
      3. Werner Von Braun- V-2 Rocket
      4. Vostok I- Russian
      5. Jupiter C- American
      6. Redstone
      7. Saturn V
  2. Review Newton's three (3) laws.
  3. Review how a rocket operated in the balloon-on-a-string experiment.
  4. Show the filmstrip "How a Jet Engine Works"
  5. Discuss the filmstrip asking how does a jet engine differ from a rocket engine.
  6. The teacher will put a diagram of a rocket on the board labeling its parts and show how it obeys the laws of action and reaction.
  7. The teacher will then show pictures of solid and liquid fuel rockets, stating the advantages and disadvantages of each types.
  8. The teacher will show some information about the new types of rockets:
    a. atomic powered
    b. ion powered

2. Satellites
   a. The teacher will review how a satellite stages in orbit. The teacher will have the children research types of satellites and draw pictures of each and information about them on each page.
   b. Each child will present at least one to the class given all pertinent information.
   c. The teacher will present transparencies of the actual pictures of the types of satellites.
3. Landing Vehicles
   a. The teacher will discuss with the children the types of ways a man could land on another planet or back on earth. The discussion will center around parachutes, winged landers (C-15), inverted rocket thrust, and the LM-2, NASA's Luner Lander.

C. Materials:
1. Overhead, transparencies, opaque projector, drawing paper, crayons, balloon, string, straw, and tape.
2. Filmstrip:
   a. "How a Jet Engine Works" - The American Gas Assoc., Inc.
3. Transparencies:
   a. "Space Travel" - Millikan Publishing Co.
4. Books:
   a. World Book Encyclopedia- Field Enterprises, Inc.
   b. Above and Beyond; Vol. N- Introduction to Aerospace Education.
   c. Concepts in Science 5; Harcourt, Brace, and World; 1966; New York.
   d. Concepts in Science 6; Harcourt, Brace, and World; 1966; New York.
   e. Illustrated Space Encyclopedia; G.P. Putnam's Sons; New York; copyright- 1965.
   f. Science 5; Laidlaw Science Series; Laidlaw Brothers Pub., Polo Alto.
   g. All About Rockets and Space Flight; Harold L. Goodwin; Random House.

Unit Objective #6: The student will be able to explain why it is necessary to have the cooperation of a myriad of peoples and jobs to accomplish space flight.

A. Criterion-Referenced Objectives:
1. Given a list of 15 occupations pertainint to space flight, the student will be able to select five (5) of these occupations and state what the contribution of these five (5) occupations is toward space flight? The teacher will get the criteria for acceptable performance.
2. Given a list of five (5) occupations the student will state how each occupations is interdependent on the others. The teacher will set criteria for acceptable behavior.

B. Learning Activities: Explain cooperation- jobs
   1. Teacher will break the students up to groups of five (5) to have the students list the ten (10) jobs they feel are most important to get a rocket into space. Show Filmstrip: "How Man Explores Space," and "Flight Around the Moon."
   2. After discussing these choices and debating why one job is more or less important than another, set up a simulated flight plan for the Apollo 11 space trip.
   3. Have the student group research the following data.
      a. Rocket on the Ground
         1. What type of rocket was used?
            a. Who designed it?
            b. What was their job qualifications?
         2. How was the rocket shipped from the manufacturer?
            a. Who were the people?
            b. What were their job qualifications?
         3. Who tested the rocket?
            a. types of jobs
            b. job qualifications
         4. Who made the space platform?
            a. types of jobs
            b. qualifications
         5. Who did the fueling of the rocket?
            a. type of jobs
            b. qualifications
      b. After Lift Off
         1. Who pilots the rocket?
            a. type of job
            b. qualifications?
         2. How is the space craft kept on course?
         3. Who programs the computers?
            a. job qualifications
            b. Who figures the trojectory?
            c. qualifications
            d. Who checks the crews health?
      c. After Lunar Landing
         1. What must an astronaut be trained to observe, find and research?
            a. forms of life
            b. radiation
            c. geological formations
            d. astronomy
            e. physiology
            f. others
      d. After Lift Off and Return to Earth
         1. Who rescues the crew?
            a. Navy frogmen
            b. Radar technicians
            c. Helicopter pilots
            d. job qualifications
         2. Who checks the crew on its return?
            a. type of job
            b. qualifications

4. After running through this procedure, the teacher will list 15 jobs on the board, from which the students will choose five (5) to explain what that persons job contributed to the whole picture. Also how each job relates to another.
5. The teacher will now lead a discussion on who pays for all this space activity.
6. Next a discussion on who or what are the benefits from space flight.
7. Show filmstrip:
    a. "Scientist Work Together" - The American Gas Assoc., Inc.

C. Materials:
1. Opaque, overhead, filmstrip projectors
2. Filmstrips:
    a. "How a Jet Engine Works"; The American Gas Assoc., Inc.
    b. "Flight Around the Moon"; Walt Disney- Encyclopedia Brittanica Film.
    c. How Man Explores Space"; SVE, Inc.; A-409-1.
3. References:
    a. World Book Encyclopedia - Field Enterprises
    b. Above and Beyond- Vol. N- Introductory to Aerospace Education; New Horizon Pub., 1968.
    c. Illustrated Encyclopedia; Putnam; 1965; Edited by Erik Bergaust.
    d. Sky School- pamphlet- General Aviation Manf. Assoc.
    e. Geology- pamphlet- American Geological Institute.
    f. A Career in Astronomy- The American Astronomical Society Pamphlet.
    g. Focus on Your Future- Professional Photographers of America, Inc - pamphlet.
    h. Future Data Processors"- pamphlet- Data Processing Management Association.
    i. Careers in Petroleum Engineering" - pamphlet- The Society of Petroleum Engineers of AIME.
    j. Careers Unlimited in Air Conditioning and Refrigeration - pamphlet- American Society of Heating, Refrigerating, and Air Conditioning Engineer, Inc.
    k. A Definitive Study of Your Future in NASA; Sol Levine, Richards Rosen Press, Inc.; Copyright, 1969. (Book)

Unit Objective #7: The student will be able to discuss the out-look of space flight in the earth's future.

A. Criterion-Referenced Objective:
1. After several class discussions on the future of space flight and space exploration, the student will write a one page paper on his own concepts of what the future holds in space travel. No criteria for performance is envisioned other then an acceptable effort put forth by the student as judged by the teacher.

B. Learning Activities:

1. The teacher will ask the students what they think about such T.V. shows as Star Trek, Lost in Space, etc.
2. The teacher will then pose the question, "Where will space travel lead us?" In this discussion the teacher can prompt the ideas of:
    a. the distances man must travel to get to the stars.
    b. types of rockets necessary for such long trips.
    c. exploring planets and stars.
    d. suspended animation.
    f. What are U.F.O.'s or flying saucers?
    g. space platforms
    h. robots
    i. etc.
3. After this discussion, the teacher will have the students write a one page paper on what they feel the future will hold for space flight.

Cuminating Activities:

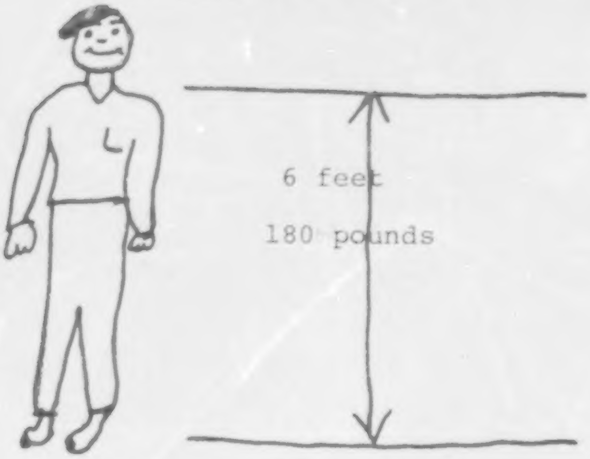
1. Making model rockets and launching them.
2. Making models of space capsules.
3. Having a simulated rocket launch with the children each assigned a particular occupation such as: astronaut, computer technician, astronomer, etc.
4. Invite people from aerospace industry to come and talk to the kids. ICI Ind. in Dover, DE.
5. Send letters to astronauts, to Goddard Space Center for information and films and to NASA for picture and information.

## PRE AND POST TEST

1. If a boy weighs 60 pounds on Earth, he will weigh:

Factors
(2.5) ________on Jupiter
(.38) ________on Mars
(1.6) ________on the Moon
(1.2) ________on Saturn
(.27) ________on Mercury

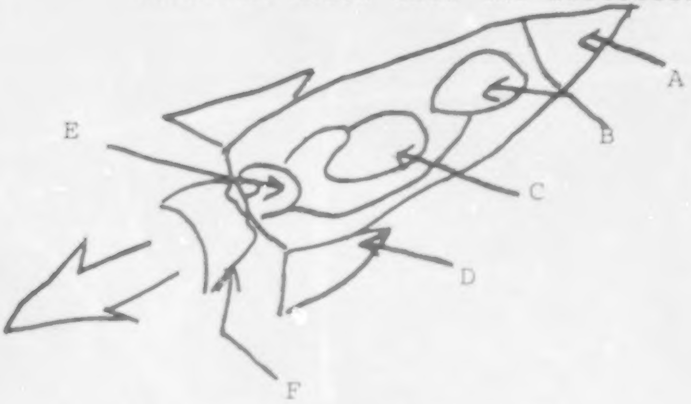
2.



A. What will this persons mass be on the Moon? ____________.

B. What will this persons weight be on the Moon? ____________.

3. Label the lettered parts of this liquid fuel rocket and by a Reaction Arrow show the direction it will travel.



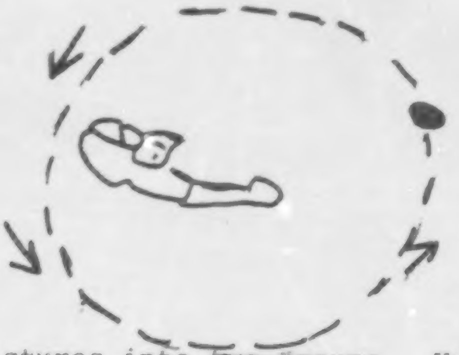
A. ______________________________
B. ______________________________
C. ______________________________
D. ______________________________
E. ______________________________
F. ______________________________

4. Write a paragraph out-lining 2 of the experiments on the Law of Action and Reaction.

5. Circle the letter of the correct definition for the Law of Action Reaction.
   a. All action has an equal reaction in the same direction.
   b. All action depends on the kind of reaction.
   c. All action has an equal and opposite reaction.
   d. All action is balanced by gravity.
   e. Reaction overcomes action.

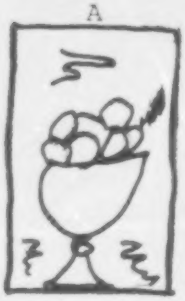
6. Write a complete definition of the Law of Inertia.

7. The string has just been released, draw a line indicating the directions the ball will follow.

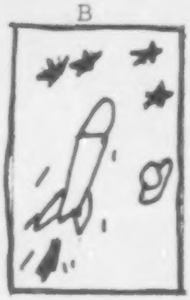


8. Classify these pictures into two groups. Use a "1" for those which pertain to the First part of the Law of Inertia, and "2" for those which pertain to the Second part of the Law of Inertia.

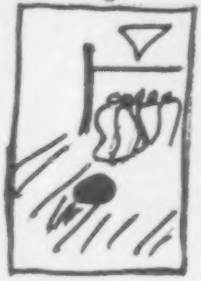
A



B



C



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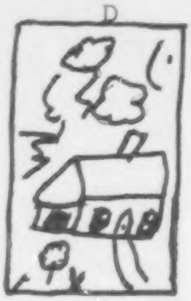

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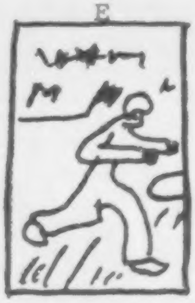
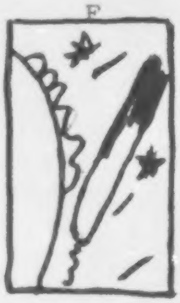


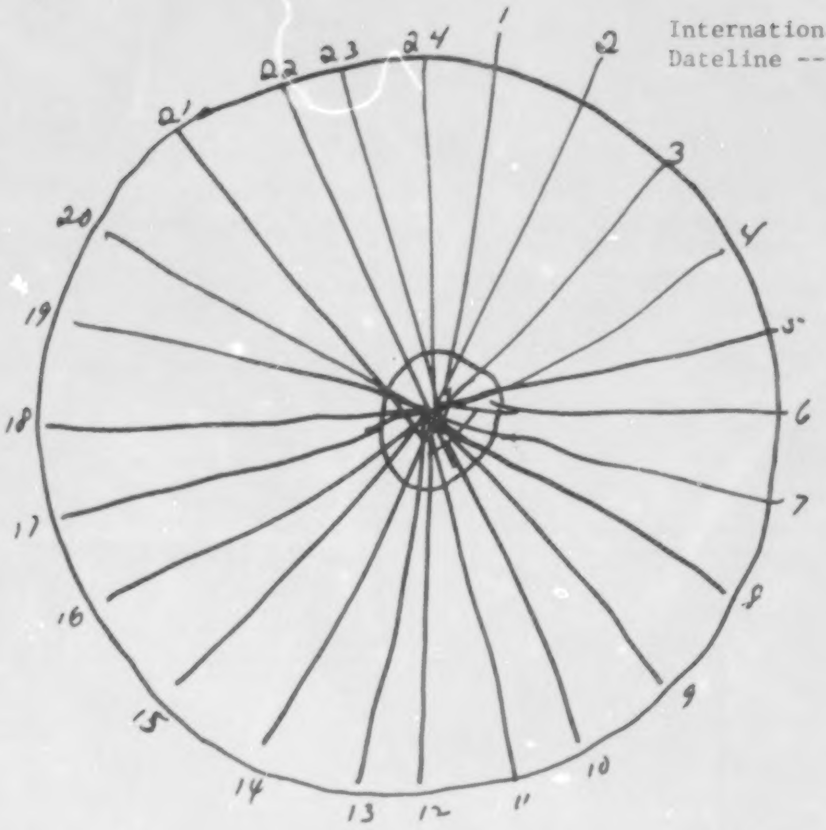
F



9. Draw a diagram of the earth in Orbit around the Sun. Draw or label the following:

a. The path the earth world take
b. The spape of the orbit
c. Direction of rotation
d. Speed of rotation
e. Direction of rebolution
f. Angle of axis
g. Put a circle representing the earth with its Axis pointed correctly on the spot of each season, along with the seasons name.

# EARTH IN SPACE

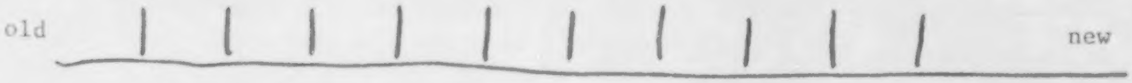


International
Dateline ----- Twelve O'clock midnight
Tuesday, July 10, 1975.

What time and day will it be at meridian?

1 ____________
12 ____________
23 ____________
6 ____________
18 ____________

11. Put these events into chronological order from oldest to newest by their letters.



Time Line

A. First man in Orbit
B. First powered Airplane
C. First Lunar Landing
D. Icarus and Daedalus
E. First manned balloon
F. First solo Flight by a woman across the Atlantic
G. First Jet powered flight
I. First Solo flight across the Atlantic by a man
J. First flight faster than sound.

12. Match this list of inventors and adventures with their accomplishments.

A. Yuri Gregarin
B. Werner Vonbraun
C. Charles Lindbergh
D. Amelia Earhart
E. Orville and Wilbur Wright
F. John Glenn
G. Dr. Robert Goddard
H. Neil Armstrong
I. Leonardo Da Vinci
J. Otto Lilenthal

_____1. First woman to cross Atlantic- Solo
_____2. Father of American Rocketry
_____3. First American to Orbit the Earth
_____4. Successful glider developer
_____5. Artist who designed helicopters
_____6. First man to cross Atlantic- Solo
_____7. Invented the V-2 Rocket
_____8. Invented first powered airplane
_____9. First Astronaut to orbit Earth
_____10. First man to fly faster than sound
_____11. First Astronaut to step on moon

13. Put the following list of words under the rocket type which best fits the word.

1. Radioactive
2. Kerosene
3. Oxidizer
4. Hard propellent
5. LOX
6. Ignitor
7. Slanted take-off
8. No-Oxidizer
9. reactor
10. Kiwi
11. Thor-Able
12. Saturn V
13. Electrons
14. Fuel Vaporizing
15. Small thrust

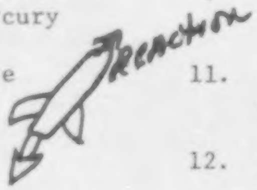
| Liquid Rocket | Solid-Fuel Rocket | Atomic Rocket | Ion Rocket |
|---|---|---|---|
| 1. | 1. | 1. | 1. |
| 2. | 2. | 2. | 2. |
| 3. | 3. | 3. | 3. |
| 4. | 4. | 4. | 4. |
| 5. | 5. | 5. | 5. |

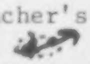
14. From the following list, pick five (5) and tell how their jobs are necessary in order to achieve space flight.

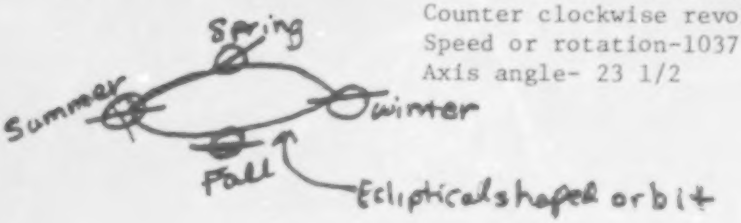
1. Chemists
2. Truck driver
3. Sailor
4. Computer programmer
5. Doctors
6. Construction worker
7. Administrator
8. Astronomer
9. Astronaut
10. Geologists
11. Electrician
12. Mathematician
13. Mechanical Engineer
14. Technicians
15. Typists

TEST KEY

1. a. (2.5) x 60 = 150 lbs. on Jupiter
   b. (.38) x 60 = 23 lbs. on Mars
   c. (1/6) x 60 = 10 lbs. on the Moon
   d. (1.2) x 60 = 72 lbs. on Saturn
   e. (.27) x 60 = 16 lbs. on Mercury



2. a. mass- a same or 6' or same size
   b. 30 lbs.
3. a. Capsule
   b. Oxidizer
   c. Fuel
   d. Fins
   e. Pump
   f. Nozzle
4. Teacher's criteria
5. (c)
6. Teacher's criteria
7. 
8. Pictures A, d group I
   b,c,e,f.
9.



Counter clockwise rotation
Counter clockwise revolution
Speed or rotation-1037 mph
Axis angle- 23 1/2

10. Meridian 1 11 p.m. Mon.
" 12 12 noon Mon.
" 23 1 a.m. Mon.
" 6 6 p.m. Mon.
" 18 6 a.m. Mon.

11. D, E, B, I, F, G, J, H, A, C
OLD ____________________ NEW

12. 1. D
2. G
3. F
4. J
5. I
6. C
7. B
8. E
9. A
10. no answer
11. H

13. Liquid Rocket

1. Kerosen 2. Oxidizer
3. LOX 4. Saturn V

Solid-Fuel Rocket

1. Hard propellant 2. Ignitor
3. Slanted take-off 4. Thor-Abl

Atomic Rocket

1. no-oxidizer 2. radioactive
3. reactor 4. kiwi 5. fuel vaporizin

14. Teacher's Criteria

Unit Title: ENVIRONMENTAL CONTROL

I. Unit Overview: The unit environmental control was written for the purposes to relate various careers and work people do in relation to the environment of all living and non-living things. To provide an awareness that an "A" person is concerned with the connrol of those forces and conditions which will ensure the protection and wise use of all natural resources.

II. Unit Content Outline:

A. Relate concern for natural resources of the environment
   1. Soil (conservation)
   2. Forest
   3. Wildlife
   4. Water
   5. Mineral
   6. Human

B. Relate an awareness of careers and work people do to protect the environment
   1. Federal Government Organizations (protection)
   2. Local and state agencies (pollution control)
   3. Other organizations (conservation)

III. Unit Objectives:

1. The Environment -- The student will be able to relate the concern for wise use of natural resources to the environment.
   a. Soil -- The student will be able to demonstrate soil conservation as a means of controlling the environment.
   b. Forest -- The student will be able to illustrate forest conservation as a means of controlling the environment.
   c. Wildlife -- The student will be able to determine wildlife conservation as a means of controlling the environment.
   d. Water -- The student will be able to distinguish water conservation as a means of controlling the environment.
   e. Mineral -- The student will be able to demonstrate mineral conservation as a means of controlling the environment.
   f. Human -- The student will be able to determine human conservation as a means of controlling the environment.
2. Protecting the environment -- The student will be able to relate awareness of careers and work people do to help protect the environment.
   a. Federal Government Agencies -- The student will be able to investigate Federal Government Agencies which establish controls of protection of the environment.
   b. State and Local Agencies -- The student will be able to investigate pollution control agencies at the state and local level.

c. Other Organizations -- The student will be able to investigate conservation organizations concerned with environmental control.

IV. Unit Description:

Unit Objective #1: **The student will be able to** relate concern for wise use of soil and natural resources and the environment.

A. Criterion-Referenced Objective: The student will be able to show wise use of soil, forest, water, wildlife, mineral and human resources for a better environment.

B. Learning Activties:

1. Student takes part in constructing a two-part diorama. Unwise vs. wise use of natural resources. Example: with cut-out pictures or drawings.

| | |
|---|---|
| Field erosion | -Soil |
| Forest land cut-clean | -Forest |
| Folld | -Water |
| An extinct animal (eagle) | -Wildlife |
| Coal strip mining | -Minerals |
| Neglected older or younger person | -Human |

C. Materials:

1. Old magazines
2. Scissors
3. Crayons
4. Construction paper
5. Paste
6. Large sheet of wrapping paper for diorama

Unit Objective #1a: The student will be able to demonstrate soil conservation as a means of controlling the environment.

A. Criterion-Referenced Objective: The student will be able to show evidence of wise use of soil for a more productive environment.

B. Learning Activities:

1. Student will survey and measure his own backyard area to determine use and purpose of soil (language, math, and science). Example: grow grass-prevent erosion, grow trees-shade, etc.
2. Student helps make community map showing best soil conditions for construction of roads, buildings, farm land, recreation, etc. (social studies)

3. Student studies types of soil.(science)
4. Student makes soil samples to note effects of weather and other uncontrolled conditions.(science)
5. Student makes pictures- dictionary to relate terms and soil control. (language) Example: Erosion- definition and small drawing as example.

C. Materials:
1. Survey paper for backyard investigation.
2. Paper for map and dictionary construction.
3. Soil samples
4. Seeds for growing top soil.
5. Reference books
6. Filmstrips:
    a. What is Soil, 631.4
    b. Soil Conservation Today and record 333.7/F

Unit Objective #1b: The student will be able to illustrate forest conservation as a means of controlling the environment.

A. Criterion-Referenced Objective:
1. The student will be able to give evidence of wise use of forest for a more productive environment.

B. Learning Activities:
1. Student will take part in construction of a flow chart showing products he uses that come from different parts of a tree. (science)
2. Example: Trunk-lumber, fruit-food, etc.
3. Student reads Smokey the Bear Comic Book for conservation information about forest. (language)
4. Student constructs a poster of Smokey the Bear and lists forest enemies. (awareness)
5. Student write story about forest helpers.

C. Materials:
1. Large paper for flow-chart.
2. Art materials
3. Reference books- Smokey the Bear, etc.
4. Chart diagram of trees parts and products.
5. Filmstrips: Forest Conservation, 333.7 and record 333.7/F.

Unit Objective #1c: The student will be able to determine wildlife conservation as a means of controlling the environment.

A. Criterion-Referenced Objective:
1. The student will be able to show evidence of wise use of wildlife for a balanced environment.

B. Learning Activities:
1. Student constructs a booklet naming and drawing kinds of wildlife he has seen and where (language). Example- Rabbit-woods, lion-circus, etc.

2. Student helps make a poster of purposes of wildlife (art) Example- Food, recreation, etc.
3. Student helps make a poster of purposes of wildlife (art) Show place of wildlife.
4. Student makes a show box model of environment for a wildlife animal of his choice. (social studies)
5. Student writes report on ways wildlife can be controlled. (awareness and language). Example- hunting season, size limit, construct planning.

C. Materials:
1. Construction paper and composition paper for booklet.
2. Reference books on Wildlife
3. Shoe boxes
4. Grass, sticks and other materials for natural environment.
5. Filmstrip: Wildlife Conservation Today, 333.7 and record 333.7/W.
6. Art materials

Unit Objective #1d: The student will be able to distinguish water conservation as means of controlling the environment.

A. Criterion-Referenced Objective:
1. The student will be able to show evidence of wise use of water for a more liveable environment.

B. Learning Activities:
1. Student will construct bulletin board display of pictures of things that need water (awareness). Example- animals, people, power plants, industry, etc.
2. Student takes part in construction diorama showing water conservation at its best.
    a. Reservoir- recreation and water storage
    b. Trees and plants- life
    c. Dam and power house- control and electricity
    d. Irrigation canals- controlled supply
    e. Water works- uses
    f. City- users
    g. Sewage plant- pollution control

C. Materials:
1. Scissors
2. Old magazines
3. Paste
4. Art materials
5. Reference books and diagram chart of water control conservatio
6. Filmstrips: Work of Running Water, 551. 3; Water Conservation Today, 333.7

Unit Objective #1e: The student will be able to demonstrate mineral conservation as a means of controlling the environment.

A. Criterion-Referenced Objective:
1. The student will be able to show wise use of minerals for a more productive environment.

B. Learning Activities:
1. Student will construct colage of conveniences of modern life (art). Example: steel-cars, Copper-telephone wire, coal and petroleum-heat and power, etc.
2. Student constructs a model of underground mine as example of one-way minerals are obtained. (science)
3. Student lists careers and types of work people do to provide minerals for industry.(language) Example: geologists to truck drivers.
4. Field trip to Atomic Energy Plant- Investigate pros and cons for atomic energy in relation to the environment. (awareness)

C. Materials:
1. Art materials
2. Reference books on minerals and methods of obtaining minerals.
3. Popeye Comic Book- King Features, 235 E. 45th Street, New York, NY 10017.
4. Field trip- Atomic Energy Plant- Peach Bottom, PA
5. Filmstrips:
   a. Coal Mining - 622.33
   b. Iron and STeel - 669.1
   c. Rocks and Minerals - 552 and record 552/R

Unit Objective #1f: The student will determine human conservation as a means of controlling the environment.

A. Criterion-Referenced Objective:
1. The student will be able to show evidence of wise use of people as most important part of the environment.

B. Learning Activities:
1. Student constructs poster showing ways he is responsible for his health, happiness and well-being.(awareness) Example: health- personal hygiene, happiness- enjoying a game, well-being- knows bike safety, etc.
2. Student surveys community for evidence of lack of human concern. (science) (Poor housing, unemployment, etc.)
3. Student makes personal inventory for determining resources he can apply to world of work. (social studies) Example: likes, dislikes, special abilities, etc.
4. Student writes a report on a career or type of work he feels best suited to him for a better environment. (awareness) Example: crime control- detective, providing services or goods- truck driver, etc.
5. Field trips to see people at work.
6. Resource personnel- Representative from industry or business to explain about condition for best human productivity. (awareness) Example: Health insurance, paid vacations, etc.

C. Materials:
   1. Art materials
   2. Community Survey sheet
   3. Personal inventory sheet
   4. Popey Career Comic Books, King Features, 235 E. 45th Street, New York, NY 10017.
   5. Field trips to local industry or business.
   6. Resource personnel from local industry or business.
   7. Filmstrips:
      a. Walter Reed and Conquest of Yellow Fever - B
      b. Work of Louis Pasteur - B
      c. Edward Livingston Trudeau and the Crusade Against Tuberculosis - B
      d. What is a Job? 371.42
      e. Social Service and Social Worker, 361
      f. Individual filmstrips review for career of choice. Example- The Banker, 332.1

Unit Objective #2a: The student will be able to investigate Federal Government Agencies which establish controls for protection of the environment.

A. Criterion-Referenced Objective:
   1. The student will be able to identify various Federal Agencies whose function is the management of natural resources for the protection of the environment.

B. Learning Activities:
   1. Student becomes aware of purpose for Federal Government Agencies by subscribing to magazines put out by various agencies. (awareness) Example: Ranger Rick's Nature Magazine-- National Wildlife Federation, Popeye Career Comic Books, Federal Environmental Protection Agency.
   2. Student works on project of concern about a particular topic.(science and social studies) Example: Soil: Agency- Soil Conservation Service; Water and Soil Agency- Tennessee Valley Authority, etc.
   3. Student plans a work experience in a particular National Park. Writes letter to National Park Services, Bureau of United States Department of Interior for information on careers and work people do.

C. Materials:
   1. Samples of magazines available upon request:
      a. Ranger Rick's Nature Magazine
      b. Smokey the Bear Conservation Magazine
      c. Popeye Career Comic Books
   2. List of Government Agencies to write to:
      a. Agriculture Department, Bureau of Dept. of Interior
      b. Central Valley Project
      c. Missouri River Basin Project
      d. National Forest
      e. National Park System
      f. Soil Conservation Service
      g. Department of Health, Education and Welfare

3. Filmstrip:
    a. Series on Conservation Today, 333.7
4. Reference books

Unit Objective #2b: The student will be able to investigate pollution control agencies at the state and local level.

A. Criterion-Referenced Objective:
    1. The student will be able to identify various state and local agencies whose function is the management of a pollution influenced environment.

B. Learning Activities:
    1. Student makes a symbol graph of Delaware's Employment. (interdependence)
    2. Student works on committee doing research on a particular topic. (social studies and science) Example: Water: recreation, transportation, power, etc.
    3. Student writes to agency for information on pollution conditions.(controls) Example: Water: Delaware River Basin Commission.
    4. Student surveys parent and/or parents as to work and people whose job it is to carry out pollution controls at their place of work or business.

C. Materials:
    1. Materials for making graph (art)
    2. Employment information- U.S. Department of Labor
    3. List of agencies to write for information
    4. Parent survey sheet

Unit Objective #2c: The student will be able to investigate conservation organizations concerned with environmental control.

A. Criterion-Referenced Objective:
    1. The student will be able to identify various organizations whose function is encouragement of environment control though conservation.

B. Learning Activities:
    1. Student surveys class to determine number of students in a club or organization that is concerned with the environment. (awareness)
    2. Student studies requirements as to type of individual for membership in organization. (social studies) Example: Boy Scout- Be prepared; and Creed- Scout is trustworthy, loyal and brave, etc.
    3. Student checks organization handbook to learn about projects for an improved environment. (social studies, science)
    4. Student takes part in an environment control activity. Example: Park clean-up and list restrictions.
    5. Resource person from organization. Example: Camp Fire Girls Leader.

C. Materials:
  1. List of different organizations for survey
     a. Boy Scouts
     b. Girl Scouts
     c. Camp Fire Girls
     d. Four-H-Club
     e. Future Farmers of America
  2. Samples of handbooks from organizations just listed
  3. Resource people- organization leader
  4. Outline plans for class project

Unit Title: LIVING THINGS

I. Unit Overview: This unit was developed to give the students understanding of how basic units of structure are organized and how these units function enabling plants and animals to live and how the community is a collection of cooperating organisms of dependent individuals. Also to give students an opportunity to appreciate the work of men and women who were pioneers in the study of cells and other areas related to the science of living things. To understand the How and Why for special tools; such as the microscope and hand-lens (magnifying glass). To develop an awareness in students that people whose careers are the production or service of living things are influenced by many of the same values and importance of self-worth, to the world of work as the botanist or zoologist.

II. Unit Content Outline:
  A. Cellular Nature of Living Things
    1. Organization of basic units of structure of living organisms- plants and animals.
    2. Functions of basic units of living organisms- plants and animals.
    3. Cooperating organisms (dependent and interdependent) as a community of living organisms- social animals and man.
  B. Knowledge of people in areas related to the science of living things and career awareness.
  C. Application of tools in areas related to the science of living things and specific careers.
  D. Awareness in students, in areas related to the science of living things, the values and importance of self-worth to the world of work.

III. Unit Objectives: NONE

IV. Unit Description:

  A. Criterion-Referenced Objectives:
    1. Appreciation of pioneers in development of Biological Science - Science of living things.
      a. Student will be able to identify, by matching the names of 8 out of 10 scientists to their individual contributions, the efforts of pioneers in the science of living things.
      b. Students will be able to identify, by pointing out on a map 4 out of 6 nations listed, the nationality of scientists that worked to benefit all mankind.
      c. Students will be able to summarize by sharing their research data the importance of scientists in study of living things.
    2. Tools for the Study of Living Things.
      a. Students will be able to select, by choosing 8 out of 10 items that were examined and discussed, things and materials that need to be better understood with the aid of microscopes.

b. Students will be able to identify, by filling in on the proper line of a micropscope diagram 8 out of 10 terms, the basic parts of a microscope.
c. Students will be able to explain and demonstrate, by demonstrate, by describing and illustrating to the class with the microscopes set-up, adjust and focus procedures, the functions of the basic parts of a microscope.
d. Students will be able to demonstrate, by illustrating to the class 4 out of 5 correct materials and performances use and care of hand-lens (magnifying glass)
e. Students will be able to identify, by organizing a list of Do's and Don't's applying 8 out of 10, guide-lines for proper care and handling of microscope and other tools for work.
f. Students will be able to identify, by circling from a list of 10 careers, 8 that are related to the use of a microscope and other areas in the science of living things.

3. Basic Structure of Living Things.
a. Students will be able to compare, by gathering data on things of their environments as living or non-living.
b. Students will be able to compare, by arranging on the bulletin board 25 out of 30 pictures and drawings under the proper title, things as living or non-living.
c. Students will be able to determine, by organizing data in a booklet, the characteristics of living things.
d. Students will be able to recognize, by measurement and observations of out, middle and inner parts of a chicken egg, basic cell structure.
e. Students will be able to identify, by attaching labels to parts of cell model, basic cell structure.
f. Students will be able to recognize, by describing observations on the slides, plant and animal cell structure.
g. Students will be able to distinguish, by drawing and labeling cell parts, structure of plant and animal cells.
h. Students will be able to identify, by matching the names of 4 out of 5 cell tissues with structural pictures, the tissues formed for human growth.
i. Students will be able to identify, by painting out on the model of the human body 8 out of 10 tissue structures, and organs that carry on certain functions.
j. Students will be able to distinguish, by each student demonstrating to the class with their model a particular system, the particular structure and functions of the six (6) systems of the human body.
k. Students will be able to describe, by following-up discussion of the film, food nutrition to cell and human growth.
l. Students will be able to recognize, by gathering data and pictures and properly mounting on the mobile, the relation of food nutrients and the basic food groups.

    m. Students will be able to identify, by selecting from career cluster, discussion and personal experience 15 out of 20 careers, the interdependence of careers as they affect society in providing good food nutrition.
    n. Students will be able to relate, by matching 8 out of a list of 10 tools to the career, the awareness of special tools in the production of goods or services for good nutrition.
    o. Students will be able to investigate, by examining data from parents survey questionnaire, attitudes, of parents toward careers related good food, nutrition and human growth.
    p. Students will be able to relate, by preparing a list of 10 questions on attitudes, talents, skills, training and rewards to be presented to research persons, and awareness of the importance of self-worth and requirements for the production of goods or services in providing good nutrition.
    q. Students will be able to identify, by assigning different jobs; such as waitresses, chefs, bus boys, dishwashers, etc., work responsibilities of individuals in providing good food nutrition.

4. How Basic Units Function Enabling Plants to Live.
    a. Students will be able to recite, by film follow-up and previous class activities, the characteristics of living things as applied to the concepts of plant cells and growth.
    b. Students will be able to identify, by attaching labels to plant structural parts, the basic plant structure.
    c. Students will be able to compare, by groups reporting to the entire class the structure and functions of plants in each group, the characteristics of Thallophytes, Brogothytes, Pteriodophytes and Spermatophytes.
    d. Students will be able to differentiate, by observing and comparing tracings of plant parts, the structure which serve as pipelines for plant parts, the structures which serve as pipelines for plant nourishment of water and minerals.
    e. Students will be able to identify, by investigation of data recorded, the affects of plant hormones under different environmental conditions.
    f. Students will be able to recognize, by follow-up on film discussion, the functions of plant parts in the food making process.
    g. Students will be able to interpret, by drawing and labeling parts of structural and functional diagram of entire plant, the process of photosynthesis.
    h. Students will be able to recognize, by completing a study-work sheet supplied by the Lab Instructor, plant structures and functions in their natural environment.
    i. Students will be able to compare, by completing a field trip questionnaire, the needs structure, and functions of plants that do not grow from seeds.

j. Students will be able to identify, by drawing and labeling a diagram 8 out of 10 parts of a plant flower and cone, the reproduction organs of angiosperm and gymnosperm group of plants.
k. Students will be able to identify, by placing 8 out of the major plant product titles on the chart, the importance of plant products to man.
l. Students will be able to appreciate, by arranging people's careers and plant products on the collage level, the value of interdependence of careers as they affect society.
m. Students will be able to appreciate, by arranging 15 out of 20 symbols on a United States map the geographical and social influences, the values of environmental and cultural differences, providing for man's basic needs.
n. Student will be able to develop an awareness by arranging with a research person to answer 10 questions about personal career attitudes, the importance of self-worth in providing plant products to supply man's basic needs.
o. Students will be able to appreciate by compiling a list of 10 (with the aid of the instructor), ways both children and parents can maintain the resources of the park, the value of preservation and advancement of plant life for all society.

5. How Basic Units Function Enabling Animals to live.
a. Students will be able to recognize, by observing the organisms in the drop of pond water, discussion, and earlier class activities, that single-celled organisms have characteristics of all living organisms.
b. Students will be able to recognize, by filmloop, follow-up, discussion, review of pictures identified as cell tissues, organs and systems of living organisms.
c. Students will be able to identify, by organizing pictures and drawings in the proper era on the time-lines the development of animals and cooperative work of geologist and zoologist.
d. Students will be able to recognize, by observing and handling fossils and other artifacts at the museum, how living things have changed over the years.
e. Students will be able to identify, by presentation, displays and demonstrations from each group, the characteristics of animals classified as vertebrates (animals with backbones) fish, amphibians, reptiles, birds and mammals.
f. Students will be able to recognize, by follow-up activities the structural and functional characteristics of animals in their natural environment.
g. Students will be able to identify, by labeling the parts of the art model, the structural and functional parts of living organisms - invertebrates (animals without backbones).
h. Student will be able to identify, by listing the four stages of development and the growth stages of most insects.
i. Students will be able to develop an awareness by analyzing their own survey sheets, the values of self-worth toward animals as living organisms.

j. Students will be able to develop an awareness, by each student sharing with the class their individual research and drawings, the many persons whose careers are the responsibility of housing and/or care of animals.

k. Students will be able to recognize, by listing 8 out of 10 career attitudes, training responsibilities and rewards, the requirements for the care of pets and other animals.

l. Students will be able to compare, by follow-up listing under the proper heading 4 out of 5 rules of each area, the laws and individual responsibilities for the protection of both animals and people.

m. Students will be able to develop an awarenss by arranging pictures of the types of recreation with different animals to illustrate the importance of animals for recreation in today's life style towards less time being spent in the actual performance of career activities.

6. How Animals Function as Social Organisms.

a. Students will be able to appreciate, by follow-up discussion of the filmstrip the organization plant and animal life have to each other, the interdepence of living organisms as a community in relation to a particular environment.

b. Students will be able to compare, by placing the plant and animal life of different characteristics in the terrarium and aquarium, the different environments in which plants and animals live together and successfully meet the necessities of life.

c. Students will be able to identify, by labeling the (1) structural parts of the honey bee (2) the titles of functional activities of different bees, the structural and functional features of honey bees in community activity.

d. Students will be able to develop an awareness, by investigating the data gathered from the survey question, the many persons whose careers are dependent upon helping solve the problems of members of that community, state and nation.

C. Materials:

1. Magic-marker pencils (1 of each major color).
2. Crayons (box for each student).
3. String
4. Large pieces of wrapping paper for time lines.
5. Twelve (12) pieces of poster paper.
6. Construction paper of various colors.
7. Scissors (1 pair for each student).
8. Chicken Eggs (1 for each set of two students).
9. Microscope (1 for each set of two students).
10. Hand-lens (magnifying glass) for each set of two students.
11. Plaster of paris, paper mache, clay for models.
12. Food from home for food party.
13. Oak seeds
14. Samples of various plants for local area
15. Pond water

P. Questionnaire- survey and worksheet
  1. Microscope worksheet
  2. Living and non-living study sheet
  3. Job survey and questionnaire
  4. Questions for resource person for food nutrition
  5. Questionnaire for resource person for plant products
  6. Survey of Pets and Other Animals I Know
  7. Honeybee diagram
  8. Questionnaire and survey, Who Helps Solve the Problem?

Q. Text books

R. Encyclopedia

S. Library books (biographies, references in biological areas and about people and their work).

T. Tools, hammer, wrench, saw, reler, microscope, piece of chalk, knife, magnifying glass, drill and stethoscope.

Unit Title: CAREERS IN MARINE OCCUPATIONS

I. Unit Overview: The purpose of this career education unit is to provide pupils with an awareness of career possibilities in marine occupations. Careers in the fishing industry, shipping industry, armed forces, construction, recreation, and oceanography will be described and individually investigated. The idea of how an "A" person fulfills requirements of a career will be developed.

II. Unit Content Outline:
   A. Description of Marine Careers
      1. fishing
      2. shipping
      3. armed forces
      4. construction
      5. recreation
      6. oceanography
   B. Individual investigation of specific careers
   C. Recognition of need for basic skills in careers
   D. Illustration of technology creating or eliminating work
   E. Recognition of significance of marine occupations
   F. Recognition of interdependence of marine occupations
   G. Identification of rewards of marine occupations
   H. Recongition of the effect of personality and attitude on job performance
   I. Classification of marine goods and services
   J. Description of how an "A" person fulfills requirements for career success

III. Unit Objectives: The students will be able to...
   1. list several marine occupations.
   2. describe one chosen career.
   3. recongize the importance of the acquisition of basic skills for marine careers.
   4. illustrate an example of technology creating or eliminating work.
   5. recognize the significance and worth of all marine occupations
   6. identify the rewards of marine occupations.
   7. recognize the interdependence of sea and land industries.
   8. recognize the effect of personality and attitude on job performance.
   9. classify marine occupations as to whether they involve the production of goods or the performing of services.
   10. recognize how an "A" person fulfills requirements of a specific career.

IV. Unit Description:

Unit Objective #1: Pupils will be able to list several marine occupations.

   A. Criterion-Referenced Objectives:
      1. Pupils will be able to list at least seven (7) marine occupations without reference to any sources of information.

B. Learning Activities:
1. Prepare a bulletin board or set up a book corner to stimulate interest.
2. Discuss the meanings of "marine" and "occupation" with pupils.
3. Discuss with class: "In exploring the world of work, we are going to take a look at marine occupations. Careers involved with the sea may be sought in the shipping industry, the fishing industry, the armed forces, construction companies, recreation, and the field of oceanography. Can you name any careers with would fit under these headings?" Develop a list such as this with class:

SHIPPING

captain
engineer
navigator
deck hand
radio man

FISHING

captain
mate
net maker
processor
bait seller

CONSTRUCTION

designer
welder
plumber
carpenter
ship salesman

ARMED FORCES

weatherman
captain
seaman
communications officer
submarine crewman

OCEANOGRAPHY

diving
mineral exploration
work with underwater habitats

RECREATION

life guard
rescue boat crewman
coast guardsman

4. In order to add to the above list, show these filmstrips to the class.
   a. "The Fishing Industry"
   b. "Commercial Fishing"
   c. "The Oceans"
   d. "Work of the Sea"
   e. "Marine Sardines"

NOTE: These filmstrips do not bring out the names of specific jobs. The teacher must ask questions in order for pupils to make influences as to specific marine jobs necessary for performing tasks or finding out information.

Examples of questions:
1. How do fishermen get nets? (net maker)
2. How do we know how sand bars form? (oceanographer)
3. How do we know that much of our rain water comes from the ocean? (meteorologists and oceanographers)
4. What job is necessary in order for a person in Kansas to get Main sardines. (fish canner)
5. Who helps a fisherman when his boat is sinking? (Coast Guard)
6. Who protects the seas for fishermen? (Navy)
7. Who builds fishing boats for fishermen? (construction companies)

5. After completing chart of Marine occupations, have several pupils reproduce it on a large sheet of paper for room display.

C. Materials:

1. Filmstrips as listed above.
2. Possible films for this activity are:
    a. "Ship Explorer Oceanographic Cruise 1960" 27 min./color
    b. "To Help Man Find His Way" 30 min./color
    c. "Tsunaoni" 28 min./color
    d. "Tides and Currents" 18 min./color
    e. "Shrimp Please" 21 min./color
    f. "It's the Marine Sardine" 20 min./color
    g. "Sponge Treasure from the Sea" 14 min./color
    h. "The Story of Menhaden" 20 min./color
    i. "Flare" 14 min./color
    j. "Estuarine Heritage" 28 min./color
    k. "Watermen of Chesapeak" 28 min./color
    l. "Pacific Halibut Fishing" 16 min./color
    m. "Outboard Fishermen U.S.A." 27 min./color

You may gain information concerning any of these films by writing to:

Motion Picture Service
Department of Commerce - NOAA
12231 Wilkins Avenue
Rockville, Maryland 20852

Supplementary Activities:

1. Fish Farming
    a. Allow interested pupils to do research on aquariums.
    b. Plan materials and types of fish to be purchased.
    c. Purchase materials (raise money through class donations).
    d. Have committee to care for fish.
    e. Attempt to breed fish.
    f. Keep records of successes or failures.
    g. Which fish fight with each other?
2. Fish Catching
    a. Cover sides of aquarium with paper.
    b. Allow pupils to carefully trawl for fish with a standare aquarium net.
3. Graph Making
    a. Make a bar graph of leading fishing industry companies.
    b. Use World Book, Red Edition, Volume 7, page 162.
4. Graph Making
    a. Make a bar graph of chief kinds of Ocean Fish and Shellfish caught.
    b. Use World Book, Red Edition, Volume 7, page 163.

5. Map Making
   a. Draw and label a world map showing kinds of fish caught around the world.
   b. Use World Book, Red Edition, Volume 7, pages 162 and 163.

Art Activities:

1. Encourage groups of students to make a collage of their chosen marine occupations.
2. Make mobils of several marine occupations.
3. Make shadow boxes (from shoe boxes) dipicting a marine occupation.
4. Allow groups of pupils to make a mural illustrating one marine occupational group.
   a. armed forces
   b. shipping
   c. fishing
   d. construction
   e. recreation
   f. oceanography

V. Unit Objective #2 - Pupils will be able to choose and describe one marine career.

A. Criterion-Referenced Objectives:

Pupils will be able to write a report describing one marine occupation, which will be at least 100 words long with less than three grammatical errors.

B. Learning Activities:

1. Present pupils with these various resources:
   a. Books (Intermediate Level)
      1. The First Book of Commercial Fishing By C. W. Harrison
      2. World Beneath The Waves by Walter Beuhr
      3. Wonders of the Deep Sea (Part IV) by Arnov and Mindlin
      4. All About the Sea (Part III) by Ferdinand C. Lane
      5. What does a River Do? by Wayne Hyde
      6. Deep Treasure by Elizabeth Olds (Oil Company)
      7. "Popeye and Marine Science Careers" (King Features Comics)
   b. Books (Primary Level)
      1. The Fisherman and His Boat by Louise and Richard Floethe
      2. Let's Find Out About the Ocean by David C. Knight
      3. True Book of Oceans by Katherine Carter
      4. Lobsterman by Dahlov Ipcar

        5. I Want to be a Ship Captain by Carla Greene
        6. I Want to be a Fisherman by Carla Greene
    c. Encyclopedias
        1. Childcraft - Vol. 10- What People Do
        2. World Book (Red Edition)
            a. Volume 4 - Coast Guard
            b. Volume 14 - Ocean (Oceanography)
            c. Volume 17 - Ships and Shipping
            d. Volume 15 - Diving, Underwater
            e. Volume 7 - Fish
            f. Volume 17 - Safety (Water)
            g. Volume 2 - Boats and Boating
            h. Volume 14 - Navy, United States
            i. Volume 13 - Marines

            Although World Book and Childcraft are the only encyclopedias specifically mentioned, others should be consulted.

2. Say to class: "You may choose any marine occupation and tell what a person holding that job does. These questions may help you in writing your report."
    a. What kind of day does a person holding your job have?
    b. What is a person holding your job expected to do?
    c. What tools or objects does a person holding your job use?
    d. What training does a person holding your job need?
3. Pupils should share their reports with the rest of the class, in order for all pupils to become aware of job possibilities.

C. Materials:
    1. Books and Encyclopedias previously listed.
    2. Supplementary musical activities: To make pupils aware of career possibilities by use of a different approach, the classroom teacher may wish to enlist the aid of the music teacher in teaching these songs to the pupils:
        a. "The Boatman's Dance" (p. 136) and "We'll Rant and We'll Roar" (p. 49) from Making Music Your Own- Grade 6.
        b. "Erie Canal" (p. 6), "Down the Ohio" (p. 8), "Blow the Man Down" (p. 10), "Old Polina" (p. 30), "Lots o' Fish in Bonavist' Harbor" (p. 32), from Making Music Your Own- Grade 5.
        c. "Away from Rio!" (p. 36) and "The Sailor Firemen" (p. 37) from Making Music Your Own- Grade 4.

    Many of the songs are about or relate obsolete jobs. Yet they provide background information and convey the spirit of work on the sea.

Unit Objective #3: Pupils will be able to recognize the importance of basic skills acquisition for marine occupations.

A. Criterion-Referenced Objectives: Upon being given four (4) choices, pupils will be able to identify the correct answer to the following questions:
    1. To gain success in a future job, what must you do?
        a. Relax, you'll learn everything when you grow older.
        b. You must learn everything this year! Don't wait.
        *c. Work steadily to learn basic things now. Harder skills will be learned as you grow older.

        d. Give up, since nobody can learn everything.

B. Learning Activities:
    1. Read (over a period of 3 weeks) Carry On, Mr. Bowditch, by Jean Lee Latham, to the class.
    2. Discussion questions:
        a. Did Nat Bowditch have an easy life?
        b. Did Nat learn everything all at once?
        c. Did Nat ever give up all hope?
        d. What obstacles did Nat meet?
        e. What did Nat accomplish?
        f. Did Nat try to learn skills gradually?
        g. Did Nat go to college?
        h. Did Nat like to learn?
    3. Other books for group or individual investigation: Robert Fulton by Marguerite Henry and Richard E. Byrd by Adele deLeeus.

Unit Objective #4: Pupils will be able to give an example of technology creating or eliminating work.

A. Criterion-Referenced Objectives:
    1. Following a class discussion pupils will be able to list two jobs created and two jobs eliminated by the development of the steamboat.

B. Learning Activities:
    1. Show filmstrip: The Steam Engine: From Riverboat to Iron Horse.
    2. Focus upon steamboats for the following discussions:
        a. What kinds of water transportation were used before the steamboat was invented?
            1. sailing ships
            2. canal boats
            3. keelboats
        b. What jobs were created by the inventor of the steamboat?
            1. engine operator and helpers
            2. engine mechanics
            3. fuel supplier
            4. tool maker
        c. What jobs were eliminated by the inventor of the steamboat?
            1. sail riggers
            2. sail makers
            3. sail menders
    3. Could you name any jobs created or eliminated by the inventor of the steamboat?

C. Materials:
    1. Filmstrip:
        a. "The Steamboat Engine" from set "Inventions and Technology that Shaped America" - Set I.

Unit Objective #5: Pupils will be able to recognize the significance and worth of all marine occupations.

A. Criterion - Referenced Objectives:
   1. Pupils will be able to write a paragraph giving two reasons why a certain member of a ship's crew is a worthwhile and necessary occupation. The pupil may choose from these ship occupations:
      a. captain
      b. engineer
      c. navigator
      d. radio operator
      e. cook
      f. janitor
      g. seamen

B. Learning Activities:
   1. Discuss with class the seven (7) ship occupations listed previously. Describe some of their duties, asking pupils to contribute any knowledge they may have.
   2. Set up a learning station in which pupils will be required to write a paragraph giving two (2) reasons why a ship's crew needs people to perform the chosen job. Directions to pupils- here are some jobs performed on a ship:
      a. Captain- he is in charge of all ship people and ship activities.
      b. Engineer- he runs the engines and knows how to fix them.
      c. Navigator- he knows the sea and plans the ship's route.
      d. Radio operator- he knows how to operate and fix the radio. He lets people on land know what the ship is doing and he finds out about the weather from people on the land.
      e. Cook- he makes meals for the crew. He must know how to make balanced meals.
      f. Janitor- he must keep cabins clean and healthy.
      g. Seamen- these people must load and unload objects, mop the deck, paint the ship, and fix any damaged objects.

      Are all of these jobs important? Does a ship need somebody to perform these tasks? Choose one of the jobs above. Write a paragraph giving two reasons why the rest of the crew needs the person doing the job you chose.

Unit Objective #6: The pupils will be able to identify the rewards of marine occupations.

A. Criterion-Referenced Objectives:
   1. Given a list of ten occupational rewards, pupils will be able to choose five (5) that are rewards of being a fisherman.
   2. Pupils will be able to write a paragraph in which they will state three (3) rewards of a marine occupation of their choice.

B. Learning Activities:
   1. Discuss these questions with pupils: "If you are a fisherman...
      a. do you live in a constant environment?
      b. do you live in an unpredictable environment?
      c. are you always close to home?

        d. are you often far from home?
        e. do you do the same thing everyday?
        f. do you have a chance to encounter adventure?
        g. do you work a steady eight hour day?
        h. do you work at odd times and sometimes long hours?
        i. do you have a chance to learn new ideas and skills?
        j. are you your own boss?

2. Present this list to the class. Ask them to put a check next to statements that state rewards of a fisherman's work.
    a. "Everyday, the same old thing takes place."
    b. "Everyday is different." ✓
    c. "I work within one mile of home."
    d. "I visit many different places." ✓
    e. "My job never has anything different."
    f. "My job can have many dangers and adventures." ✓
    g. "I work from 9:00 to 5:00 and then I can go home."
    h. "Some days I work sixteen hours." (this is a disadvantage
    i. "I have many chances to learn things from people around me." ✓
    j. "I am my own boss." ✓
3. Discuss: "All marine occupations are not like that of the fisherman. Some are more glorious and adventuresome, while others are less so, but all jobs have rewards. Have you noticed any disadvantages to being a fisherman?

B. Learning Activities II:
    1. Let each child choose one marine occupation on which to do research.
    2. Directions to pupils:
        a. Go to the library.
        b. Look up and read about the occupation you are interested in.
        c. Ask for help in finding resource materials if you need it.
        d. Write a paragraph telling about three **rewards** of having the occupation you choose.

Unit Objective #7: Pupils will be able to recognize the interdependence of sea and land industries.

A. Criterion-Referenced Objectives:
    1. Pupils will be able to identify four (4) out of five (5) land industries upon which fishermen of Nova Scotia depend.

B. Learning Activities:
    1. Show filmstrip: "Fishermen of Nova Scotia" to class.
    2. Ask: "What land industries do the fishermen of Nova Scotia depend upon?
        a. forestry- lumber for their houses, docks, and boats
        b. ship builders
        c. farming- milk and food
        d. merchants- goods of many types
        e. transportation- to bring food and supplies
        f. lighthouse keeper (not an industry but still a necessary service)

3. Ask: "How do all these industries depend upon the fishermen?"
    a. supplies vitamin rich foods
    b. supplies fertilizer for farmers
    c. supplies raw materials for medicines
4. Say: "All of these industries depend on each other. We call this interdependence. Can you give any other examples of interdependence?"

Unit Objective #8: Pupils will be able to recognize the effect of personality and attitude on job performance.

A. Criterion-Referenced Objectives:
    1. Pupils will be able to write an acceptable response to the question, "What will be the effect on productivity with this attitude?" when given several types of personalities.

B. Learning Activities:
    1. Set the state: "Let's imagine that we are passengers on an ocean liner."
    2. "What will happen if...
        a. the captain is grouchy and shouts unclear or often silly orders?
        b. the deck hands are nervous and afraid of being scolded?
        c. the radio operator is lazy and often 'goofs off?'
        d. the navigator is bored and cannot wait for his working day to end?
        e. the engineer tries his best to keep the engine running smoothly?
        f. the cook is calm and patient, always giving clear orders to his helpers?
        g. the cook's helper is bored, but tries to find something interesting in his work?
    3. Discuss consequences of personality and attitude on job performance.
    4. Discuss: If you were the owner of the ocean liner, what would you say to each of the people above?

Unit Objective #9: Pupils will be able to classify marine occupations into two (2) groups: producers of goods and performers of services.

A. Criterion-Referenced Objectives:
    1. Given a list of marine occupations, pupils will be able to classify them as to whether they are producers of goods or performers of services, with 90% accuracy.

B. Learning Activities:
    1. Discuss "What are goods?"
    2. Discuss "What are services?"

3. "Let's examine this list of marine occupations:"
    a. ship's captain (ocean liner)
    b. ship's captain (freighter)
    c. ship's captain (fishing boat)
    d. cook
    e. janitor
    f. shrimp fisherman
    g. radio operator
    h. tuna fisherman
    i. sardine canner
    j. meteorologist
    k. clam digger
    l. seaman
    m. scientist
    n. lobsterman
    o. oyster raker
    p. engineer
    q. navigator
    r. oceanographer
4. "Can you classify these as to whether they are producers of goods of performers of services?"

| GOODS | SERVICES |
|---|---|
| ship captain (fishing boat) | ship captain (ocean liner) |
| lobsterman | ship captain (freighter) |
| oyster raker | cook |
| clam digger | janitor |
| shrimp fisherman | seaman |
| tuna fisherman | scientist |
| sardine canner | meterologist |
| | engineer |
| | navigator |
| | radio operator |
| | oceanographer |

5. "Can you think of any other occupations you can classify?"

Unit Objective #10: Pupils will be able to recognize how an "A" person fulfills requirements of a specific career.

A. Criterion-Referenced Objectives:
    1. Pupils will be able to write an essay describing how an "A" person fulfills requirements of a specific career.

B. Learning Activities:
    1. Put up a bulletin board illustrating an "A" person. An "A" person is: awake, alive, active, alert, and anticipative of the future.
    2. Discuss the meaning of these terms:
        a. Awake- Get proper rest so your mind will not be asleep.
        b. Alive- Don't be a dead head. Try your best at everything.
        c. Alert- Be ready for opportunities to improve yourself.
        d. Active- Don't be lazy. Get out and do useful things.
        e. Aware- Know about the world around you (especially- be aware of career possibilities.
        f. Anticipative of the future- Make tenative plans. You can change your mind. Set up goals that you can strive for.
    3. Say: "If you are going to be an "A" person, what would be a good plan for future career success?"
    4. Discuss: "What can you do right now to prepare for the futur
        a. Try to learn basic skills- math, reading, science.
        b. Become aware of possibilities for your future.

5. Discuss: "What would you like to do in the future?"
    a. Go to college?
    b. Learn a trade?
    c. Get a job right after high school?
    d. Join the military?
6. "Whatever you plan to do, you should find out about it now!"
    a. Read books about your occupation.
    b. Write letters to companies or schools to find out what the qualifications are for your occupation.
    c. Visit places where you can witness people working in the field in which you are interested.
7. "Let's write an essay. Tell in your essay how an "A" person meets the requirements of the career of his cho[illegible]."

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Unit Title: NUTRITION

I. Unit Overview: This work is designed to use intermediate pupil's natural interest in food and focus his attention on the world of work that food procurement makes necessary for all members of all societies whether primative or contemporary and modern.

Pupils will have opportunities to take active part in action oriented work of a realistic nature.

This effort has no pretension to comprehensiveness but suggests a few ways in which to approach the move toward effective career education.

II. Unit Content Outline:

A. Nutrition - Seeds
   1. Things needed to grow a garden
   2. Selecting seeds for a garden
   3. Drawing desirable garden harvest
   4. The scale drawing of a garden
   5. The hula-hoop and the vegetable count
B. Nutrition - Who Needs Us?
   1. Food industry jobs - What workers do
   2. Research and report on one job - job-list
C. Nutrition - Foods at School
   1. Raw foods - part of a balanced diet
   2. The school menu - basic elements we need
   3. Writing an approvable lunch menu
D. Nutrition - Indian Food
   1. Museum trip: local museums or Indian Dig
   2. Indian work and modern work of food procurement - a table
   3. Model - Indian village life
E. Nutrition: A job
   1. Reading and research
   2. Writing job description

III. Unit Objectives:

1. Pupils will be able to discuss the relationship of nutrition to the work of food growing.
2. Pupils will duscuss the relationships of nutrition to the work of food growing and state definite soil requirements and labor involved.

IV. Unit Description:

A. Criterion-Referenced Objectives:

   1. Pupils will be able to name five or more essential requirements of growing a food garden in a mini-test.
   2. Pupils will be able to make use of catalog material independentely and list seeds he will buy and justify his selection.

3. Pupils express themselves in realistic or extravagent color portrayals of garden products of their "harvest."
4. Pupils will be able to make a scale-drawing representing a home garden using metric measurements.
5. Using hula-hoops small groups examine vegetation plots to find soils' potential to support numerous plant species.

B. Learning Activities:

1. Class discussion under topic "What things are needed to grow a garden?" will lead pupils to contribute the following ideas:
   a. A suitable soil, drained, open to the sun
   b. Water - rain and/or irrigation
   c. Protection from animals and trespass
   d. Tools, motors, pesticides
   e. Seeds and transplants
   f. Work
   g. Need to establish limits - realistic planning, time willing to give. Who will help with motor experiment and dangerous pesticides?
2. Pupils will be able to peruse seed catalogs as an independent activity in selecting seeds for "crops" they might choose to grow. In a followup sharing time pupils will show some realistic grasp of their own abilities and limits in problems:
   a. How much land can I spade?
   b. How much time can I give?
   c. Adult helps when needed?
   d. Have I chosen crops suited to the space and season?
   e. Rewards I can Expect? apples? radishes? wheat?
3. Pupils, upon completion of one hour in art class, will be able to show or hang their color portrayals of their expected garden harvest. Pupils should be free to choose media and degree of realism and focus. Teacher requirements might include that:
   a. Paper be filled, i.e., draw large
   b. Leaves and stems be represented
   c. Colors be in reasonable range of expectations - a tomato is red or yellow
   d. Pupils may refresh their minds by reexamination of catalog pictures but are not to trace or copy
4. Scale drawings of 2' by 3' sheets of wrapping paper will be made by pupils using centimeter rulers (suggested scale 1cm - 1 foot) showing the space allotted to each crop in his garden plan. Symbols may be used to represent plan placement. A title, labels, given scale and signature required on completed work.
5. Pupils, in groups of 4, use hula hoops to delimit a vegetation plot. They find and count (and identify by name if possible) each different kind of plant that occurs within the confines of the hoop. Random site selection proviese interesting differences--a wooded

area differs greatly from a grassy lawn or a wild meadow. Springtime is best because many plants have emerged but are not yet cumbersome in size. Specimen leaf collections become interesting displays and lead naturally to a consideration of the reasons for the variabilities in count and species occurance and soils wide range of productability.

C. Materials:

1. Coordinate activity with social studies work on regions and products
2. Old and current seed house catalogs: Agway, Burpee, etc.
3. Pictures in color of garden products. Seed catalogs
4. Centimeter rulers - 2' X 3' sheets brown wrapping paper
5. Hula-hoops. 1 for each 4 pupils (hoops are available from some physical education departments)
6. News print type magazines for collection presses

7. Books of food, gardening, farming:
   a. About the Vegetables of your Plan, be Veva Elwell Allee, Melmont Publishing, Inc., Chicago, 1960.
   b. About Farming, by Irma Balan Johnson, Melmont Publishing, Inc., Chicago, 1962.
   c. Perhaps I'll be a Farmer, by Ray Bethers, Aladdin Books, Inc., New York, 1950.

Sub-Unit: Nutrition - Who Feeds Us?

Unit Objectives:

1. The pupils will be able to relate in detail how each worker contributes to our nutritional needs.
2. Pupils will be able to write a description of some of the functions of five or six workers chosen from the list of twenty. (interim)

A. Criterion-Referenced Objectives: After study of a food industry poster--

1. Given a list of 20 food industry workers each pupil will be able to write a description of the work done by five or six.
2. Pupils who choose to do independent reading in a chosen field of work such as "veterinarian" may limit his description to the function of that one specialist.

B. Learning Activities:

1. Pupils examine a wall poster on montage of workers in many fields in the food industry and then select five or six to write about telling what each worker does in his job mentioning specific acts and operations.

2. Pupils limiting themselves to a chosen field of work will write in detail about the function of the worker reflecting the pupils special preparation and library work.

C. Materials:

1. Teacher prepared montage poster of workers in the food industry centered around the list of 20 related occupations as follows:

20 FOOD INDUSTRY WORKERS--Listed

1. Kitchen helpers at home -- mother, father, boys, girls
2. Restaurant help -- steward, chef, cooks, cook's helpers, waiters, waitresses, bus boy, dishwashers, cashier, manager
3. Dieticians -- hotel, hospital, writer
4. Biochemist
5. Doctors -- pediatrician, diet experts
6. Pure Food and Drug Administration -- officers, agents, inspectors, lab technicians
7. Farm workers -- grower, field hands (migrant harvesters) hired men
8. County agent
9. 4-H club leader
10. Veterinarian
11. Breeder
12. Artificial Inseminator
13. Rancher (ranch hands, cowboys)
14. Truck drivers
15. Cannery help (fruit, vegetable, fish, meat)
16. Freezer help
17. Meat-packer help
18. Fisherman
19. Store workers - counter help, cashier, stock boys, meat cutter, packers, delivery
20. Wholesalers and distributors

SUB-UNIT: Nutrition - Food at School

Unit Objectives:

1. Pupils will become acquainted with raw vegetables and fruits as basic elements of a balanced diet.
2. Pupils will select items from school menus and relate them to basic nutritive elements.
3. Pupils will write lunch menus that reflect their grasp of basic nutritive requirements.

A. Criterion-Referenced Objectives:

1. Pupils will prepare and serve a mid-morning snack featuring raw vegetables and fruits that satisfy certain basic nutritional requirements.

B. Learning Activities:

1. A committee of pupils will, under the teachers direction, prepare a raw vegetable and/or fruit for the class snack. Preliminary discussion should center on work habits expected of persons employed in food industries. Instructional directions will cover:
   a. Preliminary washing of hands
   b. Washing, peeling, if necessary; cutting or slicing; and arranging the food attractively on a serving plate.
   c. Serving rhe "customers." (By playfilly entitling the work roles as asumed here as "cook," "chef," "waiters," "scullery aid" the pupil will associate the task with a career.
   d. Cleaning up and shelving tools. (It is important that each role receive equal and impartial recognition in respect to the concept, "dignity of work.")

   Suggestions:

   1. During the autumn an abundance of home garden stuff prevails. Cooperatively parents and pupils are often eager to contribute from surpluses.
   2. A small sprinkle of salt makes some raw foods more interesting.
   3. Snacks that direct attention away from cookies and sweets are nutritionally sound:
      a. vitamin and mineral intake
      b. roughage
      c. cleans teeth instead of leaving a sugar residue
      d. tends to correct ones--reliance on carbohydrates
   4. Some neighborhood families might welcome a class visit to the garden. Pupils might be provided experiences in tilling, compasting, mulching, weeding, harvesting, etc.
   5. Feasible under careful prearrangement: Pupils in work groups of three might get class--release time to work with cooperating mothers in home kitchens in order to have direct experience in food preparation and preservation for winter use through canning, freezing, and preserving.

C. Materials:

1. Resource persons: cooperating parents, neighbors
2. A source of raw vegetables, fruits

SUB UNIT: Nutrition - Indian Food

Unit Objectives:

A. Criterion-Referenced Objectives:

1. The pupil will be able, upon selecting his favorite school menu, to state in chart from which food item matches which basic nutrition requirement.

B. Learning Activities:

1. Individual pupils examine the school lunch menu of the week. (extra copies obtainable at school office).
2. Pupils will discuss their favorite lunches. While interest in high pupils are asked to study food charts and/or science-health texts to a certain the nutritional values of the items on the favorite lunch. (charts may be posted in learning station style for pupil perusal).
3. Pupils should complete this one-period study by writing in chart form the food items matched with nutritive classification, e.g.:

| | |
|---|---|
| spaghetti | carbohydrate |
| meat sauce | protein, fat |
| cole slaw | vitamins |

4. Pupils wishing to do further work can be referred to library books on display in the classroom. (see materials). Topics for pupil reports should be limited to a particular area or aspect. Suggestions:
   a. "Products Made from Mill,"
   b. "Why Carbohydrates"
   c. "Our Need for Minerals"
   d. "Our Need for Vitamins"
   e. "Sources of Fat"
   f. "Fodds that Provide Vitamin C"
   g. "Some Trace Elements"
   h. "Calcium is For...."
   i. "Green and Yellow Vegetables"

C. Materials:

1. One current school menu for each participating pupil.
2. Standard food charts
3. Booklet:
   a. "How Your Body Uses Food" by Albert Piltz. Ph.D.; National Dairy Council, Chicago, 1964.
4. Books:
   a. Nothing to Eat But Food, by Frank Jupo, Aladdin Books, NY, 1954.
   b. The Great Nutrition Puzzle, by Callahan and Payne, Charles Scribner's Sons, NY, 1956.
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   d. Understanding Food, by Tannenbaum and Stillman, McGraw Hill, NY 1962.

SUB-UNIT: Nutrition: A Job

Unit Objective:

1. Pupils will write lunch menus that reflect their grasp of basic nutrition requirements.

B. Learning Activities:

1. The science class will form five committees (one for each day of the school week) to plan menus for a week acceptable for cafeteria use throughout the District.
   a. The work requires cross-checking between committees to ensure variety in the menu of the week.
   b. Each committee will work under guidelines concerning basic food requirements as presented in the health and science texts.
   c. Upon presentation to the whole class of the Monday, Tuesday, Wednesday, Thursday, Friday menus the committee members will state justification for each item chosen in respect to its nutritive function, e.g. "The bread and butter provides for a part of our body's need for carbohydrat, fat, protein and vitamins if enriched flour is used," or "The minute steak is protein, a nutrient that provides growth, replacement of cells, anti-bodies, and elasticity for blood vessels."
   d. The resource person will evaluate the final boarded chart of the pupils' menu week.

C. Materials:

1. Health and Science texts
2. Standard Food Charts
3. Resource persons: cafeteria manager, dietician, school nurse

V. Sub-Unit: Nutrition - Indian Food

Unit Objectives: Pupils will be able to write a table of primative work tasks and modern equivalents or write a narrative report on the work day in an Indian Village.

A. Criterion-Referenced Objectives: Having viewed local or city museums and/or Indian Digs with lecturer or guide pupils will be able to:
   1. Write a comprehensive table of primative work tasks and modern equivalents, or
   2. Write a report on the work day in an Indian Village.

B. Learning Activities:

1. Pupils make library selections on American Indian life and table books in classroom for class use.
2. Class visits local or city museum and/or Indian Digs with lecturer-guide focusing attention on work life of primatives.
3. Pupils write a table of work tasks of the primative group studied and show modern equivalents (where existent).

   - a. hoeing -- tractor plowing
   - b. seeding -- wheat drilling
   - c. seed gathering -- combine
4. Pupils write a report on a particular occupation of an Indian Village member in relationship with other members showing a degree of interdependence.
5. Pupils build model Indian Village to illustrate labor roles related to nutritional needs of the people.

C. Materials:

1. Resource persons: museum lecturer/guide
2. Selection of library books on American Indian life.

## VI. Sub-Unit: Nutrition - A Job

Unit Objectives: Pupils will be able to write a description of the work done by a worker in a specific job.

A. Criterion-Referenced Objectives:

Pupils will be able to describe the work of a chosen job in the field of food production in a written report. The paper will reflect the reading and "research" the pupil has done on the topic.

B. Learning Activities:

1. Pupils select a job in the field of food production such as farms, ranch hand, trucker, waiter, etc., and read stories, pamphlets, encyclopedia articles, other, and write a report which traces the step by step work that must be done in the job routine.
2. Pupils should make an effort to portray more than the mechanics of motion and show the human elements of the working man on the job. Considerations should be given to several of the following aspects:
   - a. Title of job?
   - b. How is work performed:
      1. hand operation
      2. machine controlled
      3. party hand; partly machine
   - c. Is worker well paid?
   - d. Are work conditions pleasant?
   - e. Hazards of the work?
   - f. Special interests of the work?
   - g. Monotony and/or hardships?
   - h. Where is work done?
   - i. What would next step in job advancement be?
   - j. Is work solitary or part of a group effort?
   - k. How long does it take to perform each part of the work?

C. Materials:

1. World Book Encyclopedia
2. Library:
   a. "I want to be..." series
   b. "First Book of ..." series
3. Film strips on occupations

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5. I Want to be a ... Series, by Carla Greene, Childrens' Press.

# APPENDIX A

# APPENDIX A

## UNIT AUTHOR AND SCHOOL

| Unit Number | Author | School |
|---|---|---|
| A-2 | Frank Bensinger | Wilson |
| B-1 | Emily McGlinchy | Wilson |
| B-2 | Emily McGlinchy | Wilson |
| B-3 | Kathi Price<br>Betty Ann Miles | Maclary |
| B-4 | Kathi Price<br>Betty Ann Miles | Maclary |
| B-7 | Tom Jenkins | McVey |
| B-8 | Kathi Price<br>Betty Ann Miles | Maclary |
| B-9 | Linda Weaver | Brookside |
| B-10 | Maxine Shay | Brookside |
| B-11 | Tom Jenkins | McVey |
| B-12 | Tom Jenkins | McVey |
| B-13 | Kathi Price<br>Betty Ann Miles | Maclary |
| B-14 | Tom Jenkins | McVey |
| B-15 | Barbara Powel | Cobbs |
| B-16 | Emily McGlinchy | Wilson |
| B-17 | Barbara Powel | Cobbs |
| B-18 | Joan Bussard | Leasure |
| B-19 | Kathi Price<br>Betty Ann Miles | Maclary |
| B-20 | Emily McGlinchy | Wilson |
| B-21 | Emily McGlinchy | Wilson |

# APPENDIX A

## UNIT AUTHOR AND SCHOOL

| Unit Number | Author | School |
|---|---|---|
| C-1 | Frank Bensinger | Wilson |
| C-2 | Henry Moore | Brookside |
| C-3 | Henry Moore | Brookside |
| C-4 | Mike Cox | Brookside |
| C-5 | Henry Rickerman | Brookside |